

**Rico Surface Water Sampling
Supplemental Surface Water Quality Monitoring
Rico, Colorado
Data Summary Report**

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Rico, Colorado
Surface Water Sampling Report
October 2011 Sampling Event

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1.0 Introduction

In accordance with the Rico Sampling and Analysis Plan for Supplemental Surface Water Quality Monitoring at Rico, CO prepared by AECOM, dated November 2010, the surface water sampling event was completed on October 20th – 21st, 2011. Sampling was completed by Anderson Engineering Co. Inc., by technicians who are familiar with the Rico sites and the BP Control of Work Management System. Surface water samples were collected from prescribed locations within the St. Louis settling pond system and at the system discharge (002) to the Dolores River (collectively referred to as the St. Louis pond system), and previously sampled locations along the Dolores River above, at and below the St. Louis pond system. Figure 1 and Figure 2 (see Appendix A) illustrate the location of the various sampling stations. Sample results are summarized and laboratory analytical results are attached with quality control documentation.

2.0 Field Sampling

2.1 Sampling Frequency

The sampling period represented by this sampling event is for the month of October of 2011. Sampling will be performed on a monthly basis until at least April of 2012

2.2 Water Quality and Flow Measurement Sampling Locations

Samples were collected from the locations described on Table 1 and shown on Figure 1 and Figure 2 in Appendix A.

The Dolores River was sampled above the St. Louis pond system, and below the adit outfalls downstream of the reclaimed Silver Swan Mine area. The river was also sampled at the USGS gaging station downstream of the Silver Swan site.

TABLE 1 - Sample Location Summary

SITE ID	SITE DESCRIPTION
DR-4-SW	Dolores River below Silver Swan
DR-1	Dolores River above St. Louis settling pond system
DR-2	Dolores River immediately above the St. Louis settling pond system outfall
DR-3	St. Louis tunnel discharge at adit
DR-4	Discharge of Pond 15
DR-5	Discharge of Pond 8
DR-6	St. Louis settling pond system outfall to the Dolores River
DR-7	Dolores River below St. Louis settling pond system outfall
DR-G	Dolores River at USGS gaging station #09165000

2.3 Sampling Station Descriptions

The sampling requirements and stations are described in detail below:

DR-4-SW. Dolores River below Silver Swan. Sampling/flow measurement location is on the Dolores River below the Silver Swan site just downstream of a bend in the river and below a cemetery on the east bank. Flow measurements were collected by flowmeter.

DR-1. Dolores River above St. Louis settling ponds system. The sampling/flow measurement location is on the Dolores River approximately 50 feet upstream of the Rico Ranger Station. Flow measurements were collected by flowmeter.

DR-2. Dolores River immediately above the St. Louis settling pond system outfall. Sampling/flow measurement location is on the Dolores just above the 002 discharge outfall, and upstream of the hot tub discharge. The site is located directly adjacent to the thermal discharge which supplies the hot tub. Flow measurement was collected by flowmeter.

DR-3. St. Louis tunnel discharge at adit entrance. Sampling location is at the inlet of the flume, just before the throat. Flow measurement by an installed 9" flume at the sampling location.

DR-4. Discharge of Pond 15. Flow measurement was collected by flowmeter.

DR-5. Discharge of Pond 8. Flow measurement was collected by flowmeter.

DR-6. St. Louis settling ponds system outfall to the Dolores River (Outfall 002). Flow measurement by installed 9" flume.

DR-7. Dolores River below St. Louis settling ponds system outfall. Sampling/flow measurement location is located just off the entrance road to the St. Louis ponds site where the Dolores River is adjacent to the entrance road. The site is located approximately 75 feet downstream from a large bend in the river that first brings the Dolores adjacent to the entrance road. Flow measurements was collected by flowmeter.

DR-G. Located at the USGS gauging station #09165000. Flow measurements were collected by flowmeter.

3.0 Sampling and Analysis Parameters and Methods

All samples were collected as grab samples. Samples were collected from well-mixed locations, which are representative of conditions within the flow stream. Lab-certified plastic bottles were used to collect sample water for analyses. Clean hands, dirty hands procedures were followed throughout the sampling. For quality control purposes, one duplicate sample and one field blank were included with the water samples being submitted to the laboratory for analysis.

Lab-certified plastic bottles were used to collect all water samples. Sample water was first collected in clean plastic jugs, and within 10 minutes, placed in the sampling bottles. A 500 mL HDPE bottle was used to collect a sample for alkalinity, TDS, TSS, and sulfate analyses. A 250 mL HDPE bottle was used to collect a sample for salinity analysis. Sample water for dissolved metals analysis and potentially dissolved metals analysis was filtered through a 0.45 μ m filter into a 250 mL sample bottle containing nitric acid preservative. Sample water for total recoverable metals analysis and water hardness was collected without filtration in a 250 mL HDPE sample bottle containing nitric acid preservative. Sample water for cyanide analysis was collected without filtration into a 250 mL HDPE sample bottle containing sodium hydroxide preservative.

Field parameters were measured at the time of sample collection. Field measurement data for pH, temperature, conductivity, and dissolved oxygen were recorded using an EXTECH Instruments DO610 ExStik II DO/pH/Conductivity kit, and results were logged in the field log book. The field instrument was calibrated prior to use with equipment calibration and maintenance standard solutions and consistent with manufacturer's instructions. Weather parameters including temperature and precipitation were obtained and documented.

All sample bottles were labeled to identify sample number, date and time of collection, type of analysis, and appropriate preservative. In addition, sample analysis/chain of custody forms were completed and processed at the time of sample collection. Original chain of custody forms are signed, dated, and placed in the sample container prior to sealing the container for shipment.

Water samples were kept in cooled containers and sent to the analytical laboratory. Samples were submitted to Pace Analytical Laboratories in Lenexa, Kansas for analysis by analytical procedures listed on Table 2. Analysis was performed according to methods specified in 40 CFR, Part 136 or other methods approved by the EPA. Laboratory methods and reporting limits for all parameters are presented in Table 2. Laboratory results and supporting documentation including quality assurance results are contained in the Appendix C and Appendix D of this report.

TABLE 2 - Analytical Procedures Summary

Parameter	Detection Limit (MDL)	Method
Field Parameters		
pH (s.u.)	+/- 0.01 pH	EPA 150.2
Temperature (°C)	+/- 1°C	Standard Method 2550
Conductivity ($\mu\text{mhos}/\text{cm}$)	+/- 2% Full Scale	EPA 120.1
Dissolved Oxygen	+/- 2% Full Scale	SM 4500-OG
Non-Metals		
Alkalinity (mg/L as CaCO ₃)	RL – 20 mg/L	EPA 310.1
Hardness (mg/L as CaCO ₃)	RL – 0.5 mg/L	SM 2340 B
Total Dissolved Solids (mg/L as TDS)	RL – 5.0 mg/L	SM 2540C
Total Suspended Solids (mg/L as TSS)	RL – 5.0 mg/L	SM 2540D
Cyanide ($\mu\text{g}/\text{L}$ as CN)	RL – 0.005 mg/L	EPA 335.4
Salinity	RL – 6 mg/L	SM 2510B (calculated)
Sulfate (mg/L as SO ₄)	RL – 1 mg/L	EPA 300.0
Total and Dissolved Metals		
Aluminum ($\mu\text{g}/\text{L}$ as Al)	2 $\mu\text{g}/\text{L}$	EPA 200.8
Antimony ($\mu\text{g}/\text{L}$ as Sb)	0.07 $\mu\text{g}/\text{L}$	EPA 200.8
Arsenic ($\mu\text{g}/\text{L}$ as As)	0.09 $\mu\text{g}/\text{L}$	EPA 200.8
Barium ($\mu\text{g}/\text{L}$ as Ba)	0.08 $\mu\text{g}/\text{L}$	EPA 200.8
Beryllium ($\mu\text{g}/\text{L}$ as Be)	0.02 $\mu\text{g}/\text{L}$	EPA 200.8
Cadmium ($\mu\text{g}/\text{L}$ as Cd)	0.03 $\mu\text{g}/\text{L}$	EPA 200.8
Calcium ($\mu\text{g}/\text{L}$ as Ca)	10 $\mu\text{g}/\text{L}$	EPA 200.8
Chromium (ug/l as Cr)	0.25 ug/L	EPA 200.8
Copper ($\mu\text{g}/\text{L}$ as Cu)	0.07 $\mu\text{g}/\text{L}$	EPA 200.8
Iron ($\mu\text{g}/\text{L}$ as Fe)	4.67 $\mu\text{g}/\text{L}$	EPA 200.8
Lead ($\mu\text{g}/\text{L}$ as Pb)	0.05 $\mu\text{g}/\text{L}$	EPA 200.8
Magnesium ($\mu\text{g}/\text{L}$ as Mg)	2.5 $\mu\text{g}/\text{L}$	EPA 200.8
Manganese ($\mu\text{g}/\text{L}$ as Mn)	0.17 $\mu\text{g}/\text{L}$	EPA 200.8
Mercury ($\mu\text{g}/\text{L}$ as Hg)	0.049 $\mu\text{g}/\text{L}$	EPA 245.1
Nickel ($\mu\text{g}/\text{L}$ as Ni)	0.07 $\mu\text{g}/\text{L}$	EPA 200.8
Potassium ($\mu\text{g}/\text{L}$ as K)	10 $\mu\text{g}/\text{L}$	EPA 200.8
Selenium (ug/l as Se)	0.22 ug/L	EPA 200.8
Silver (ug/L as Ag)	0.25 ug/L	EPA 200.8
Sodium ($\mu\text{g}/\text{L}$ as Na)	25 $\mu\text{g}/\text{L}$	EPA 200.8
Thallium ($\mu\text{g}/\text{L}$ as Tl)	0.05 ug/L	EPA 200.8
Vanadium ($\mu\text{g}/\text{L}$ as V)	0.05 ug/L	EPA 200.8
Zinc ($\mu\text{g}/\text{L}$ as Zn)	2.5 $\mu\text{g}/\text{L}$	EPA 200.8

4.0 Flow Measurement Methods

Flows were measured at the river sampling locations where accessible. The flow measurements obtained this sampling period are described in Section 2.3. Flow velocity was measured for sampling locations DR-1, DR-2, DR-3, DR-4, DR-5, DR-6, DR-7, DR-4-SW, and DR-G. Cross-sectional areas could be safely obtained at all river sample locations (DR-1, DR-2, DR-7, DR-4-SW, AND DR-G) and at the discharge spillway of pond 8 (DR-5). Refer to Figures 3 through 8 in Appendix E for these cross sections. The flowrates are presented on Table 3 in Appendix B.

Flowrates collected during this sampling event were taken by use of a Global Water Flow Probe FP211 portable flow meter using the six-tenths-depth method. This method uses the velocity at six-tenths of the depth as the mean velocity. This method is generally reliable between depths from 0.3 feet to 2.5 feet. Stream sections were selected with the desired characteristics of parallel flows, smooth streambed with minimal obstructions, a straight channel, and a flat streambed. The stream section, perpendicular to the flow was measured in feet. The width of the section was determined and divided into several vertical sections. Flow measurements of velocity (by the six-tenths-depth method) and water depth were measured at each vertical section using the Global Water Flow Probe FP211. The flow meter was set to the 3 second fixed period average mode. A minimum of three velocity readings were recorded at each vertical section. Flows were calculated for each stream section using the water depth, horizontal distance, and averaged velocity data.

The St. Louis tunnel flow (DR-3) and St. Louis pond discharge (DR-6) currently have Parshall flumes installed. Flow measurements can be determined at these flumes when the depth of flow is known at a particular point. In order to continuously monitor and measure the depth of flow, depth measurement devices were installed on May 11th, 2011 and May 12th, 2011 at both the north and south flumes. An STI Ultrasonic IRU-5180 automated water level detector was installed at the north Parshall flume. It is suspended over the flow stream and measures the distance from the sensor to the water surface using ultrasonic sound waves. It then uses that value to determine the depth of flow, and reports it. The south flume has a submersible pressure transducer called the OTT Orpheus Mini. It records deviations from a pre-programmed depth of air space from the top edge of the flume down to the water level. Knowing then the total depth of the flume, the depth of flow can be determined. The post processed data for these two devices for the month of October, 2011 is given in Appendix I and Appendix J.

It has been observed that the flow at the north Parshall flume (DR-3) have recorded readings with some variability. Actions have been taken to reduce turbulent flow entering the flume by laying the liner as flat as possible. Additionally, the manufacturer has provided guidance for data error correction that has been implemented. In order to obtain accurate data a transducer water flow measurement device has been ordered and is to be installed to confirm the ultrasonic readings.

5.0 Analytical Results

The results of the laboratory analysis are summarized on Table 4 in Appendix B. The data is organized by sample location. The laboratory results report is contained in Appendix C.

6.0 Quality Control

In addition to the standard laboratory Quality Control (QC), field QC samples for this sampling event included a field duplicate and a Field Blank (FB).

6.1 Field QC

A field duplicate water sample was collected from sample location DR-3. During sample collection, the duplicate sample bottles were filled simultaneously from the discharge stream of water. The duplicate sample was submitted to the analytical laboratory with the label of DR-8, so as to serve as a “blind duplicate.”

Table 5 compares the analytical results from DR-3 and DR-8 and presents the Relative Percent Difference (RPD). The RPD for aqueous samples should be +/- 20%. All comparative values were within +/-20%.

TABLE 5 – Relative Percent Difference (RPD) of Total Metals Portion Between DR-3 and Duplicate Sample DR-8

Analyte (Total)	DR-3 ($\mu\text{g/L}$)	DR-8 ($\mu\text{g/L}$) Duplicate of DR-3	RPD (%)
Aluminum	215	197	-8.74
Antimony	<0.50	<0.50	0.00
Arsenic	<0.50	<0.50	0.00
Barium	19.1	19.2	0.52
Beryllium	0.53	0.62	15.65
Cadmium	18.1	17.9	-1.11
Calcium	235000	236000	0.42
Chromium	<0.50	<0.50	0.00
Copper	27.6	25.9	-6.36
Iron	4040	3910	-3.27
Lead	1.3	1.2	-8.00
Magnesium	20000	19800	-1.01
Manganese	3530	3400	-3.75
Mercury	<0.20	<0.20	0.00
Nickel	6.2	6.0	-3.28
Potassium	1620	1590	-1.87
Selenium	<0.50	<0.50	0.00
Silver	<0.50	<0.50	0.00
Sodium	9480	9380	-1.06
Thallium	<0.10	<0.10	0.00
Vanadium	<0.10	<0.10	0.00
Zinc	3850	3880	0.78
Alkalinity (mg/L)	108	104	-3.77

Hardness	668000	670000	0.30
TDS (mg/L)	917	923	0.65
TSS (mg/L)	6.0	7.0	15.38
Cyanide	<0.0050	<0.0050	0.00
Salinity (mg/L)	726	696	-4.22
Sulfate (mg/L)	538	604	11.56

A Field Blank (FB) was collected by pouring distilled water through the filtering manifold after the first day of sampling and decontaminating the equipment. The FB was analyzed for the same constituents as the other samples. The FB had below detectable concentrations for all metals except total calcium and dissolved barium. The pH was near neutral, the Electrical Conductivity (EC) was non-detectable, and it showed a low level of alkalinity.

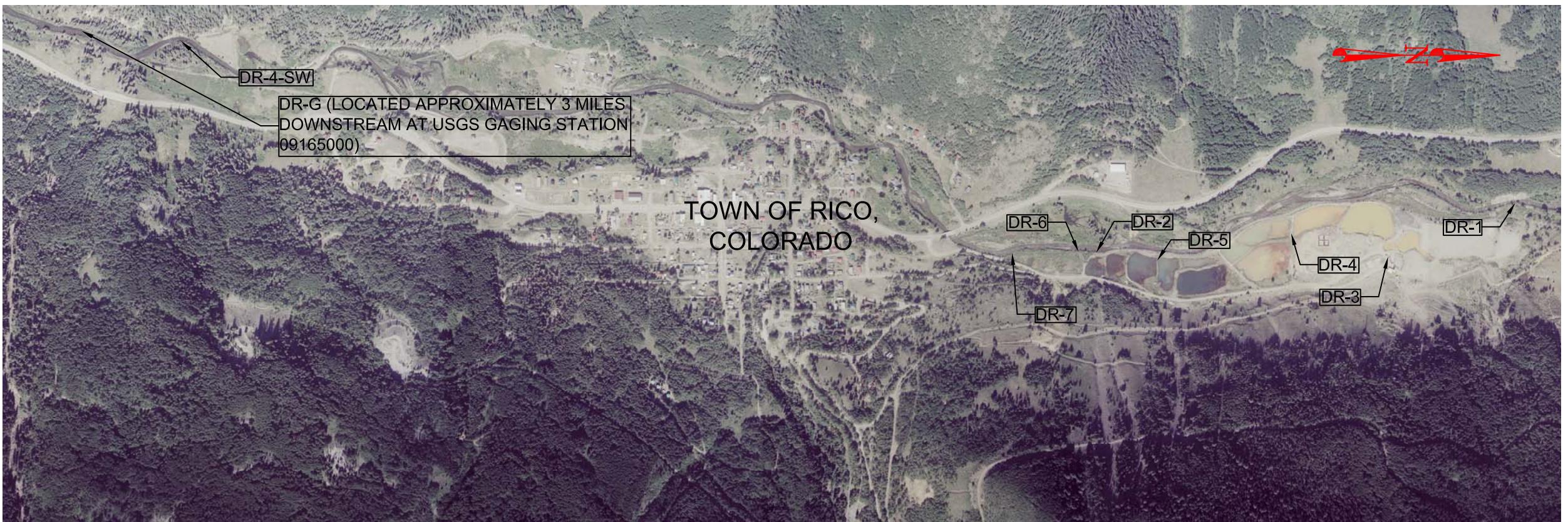
6.2 Laboratory QC

The laboratory control sample (LCS), method blank, matrix spike, and matrix spike duplicate sample results were all within the established limits of concentration, percent recovery, and relative percent difference, with several minor exceptions under the following:

- The matrix spike and matrix spike duplicate recovery not evaluated against control limits due to sample dilution for aluminum, calcium, magnesium, manganese, copper, iron, potassium, and zinc.
- The matrix spike recovery exceeded QC limits for the Matrix Spike / Matrix Spike Duplicate for aluminum, calcium (dissolved), magnesium (dissolved), and Matrix Spike Sample for mercury (dissolved). Batch accepted based on laboratory control sample (LCS) recovery.

QC results are summarized in Tables 6 through 9 In Appendix B with the full laboratory QC results presented in Appendix D.

Appendix A
Sampling Location Maps



General Notes

Scale in Feet
0 500 1000

No.	Revision/Issue	Date

ATLANTIC RICHFIELD COMPANY



ANDERSON
ENGINEERING COMPANY, INC.

DRAWN BY: MAD

ENGINEER: CS, MAD

APPROVED:

RICO SURFACE WATER SAMPLING

SURFACE WATER SAMPLING LOCATIONS

RICO, CO

Project	Figure
Date 09-FEB-2011	
Scale 1" = 1000'	1



General Notes

Scale in Feet
0 175 350

No.	Revision/Issue	Date

ATLANTIC RICHFIELD COMPANY



DRAWN BY: MAD
ENGINEER: CS, MAD
APPROVED:

RICO SURFACE WATER SAMPLING

ST. LOUIS POND AREA SAMPLING LOCATIONS

RICO, CO

Project	Figure
Date 09-FEB-2011	
Scale 1" = 350'	2

Appendix B

Data Tables

TABLE 3 - Sampling Field Data and Station Information Summary

	Field Measurements				GPS Location							
Sample Location	pH	Temp (°C)	EC (mS/cm)	Dissolved Oxygen (ppm)	Latitude	Longitude	Date	By	Stream Cross section area (ft^2)	Flowrate (cfs)	Comments	
DR-1	8.61	2.4	0.390	2.30	37°42'37.6" N	108°01'56.0" W	10/20/2011	M. DeFriez, D. Smith	29.5	70.1	Cross section on the Dolores River above St. Louis settling pond system (approximately 800 ft north of the northern edge of Pond 18). Flow Measurement by flow meter.	
DR-2	8.05	6.3	0.349	1.90	37°42'03.96" N	108°01'49.89" W	10/20/2011	M. DeFriez, D. Smith	44.5	50.0	Cross section on the Dolores River, approximately 150 ft north of system outfall. Flow measurement by flow meter.	
DR-3	7.4	16.6	1.129	0.98	37°42'27.5" N	108°01'50.3" W	10/20/2011	M. DeFriez, D. Smith	NA	1.76	St Louis adit discharge. Flow measurement by installed Parshall Flume.	
DR-4	7.34	11.7	1.241	1.38	37°42'19.7" N	108°01'52.7" W	10/20/2011	M. DeFriez, D. Smith	NA	1.65	Pond 15 discharge. Flow measurement by flow meter.	
DR-5	8.28	12.1	1.120	1.38	37°42'08.8" N	108°01'49.7" W	10/20/2011	M. DeFriez, D. Smith	NA	1.6	Pond 8 was discharging at multiple small locations as well as the spillway. Flow velocity measurements were collected at the spillway. Due to the shallow water and multiple paths, accurate flow measurements could not be determined for this sampling location and period. Leakage was estimated by water balance. Flow measurements were take at spillway by flow meter.	
DR-6	7.09	7.9	1.202	1.81	37°42'02.4" N	108°01'50.2" W	10/20/2011	M. DeFriez, D. Smith	NA	1.42	Outfall to Dolores River. Flow measurement by installed Parshall Flume.	
DR-7	7.95	7.4	0.403	1.86	37°41'57.12" N	108°01'49.63" W	10/20/2011	M. DeFriez, D. Smith	45.4	52.0	Cross section on the Dolores River, approximately 500 ft below St. Louis settling pond system outfall. Flow measurement by flow meter.	
DR-8	7.4	16.6	1.129	0.98	37°42'27.5" N	108°01'50.3" W	10/20/2011	M. DeFriez, D. Smith	NA	1.76	DR-8 is a duplicate sample of DR-3. See comments for DR-3.	
DR-4-SW	7.49	5.4	0.345	2.16	37°40'49.4" N	108°02'09.0" W	10/21/2011	M. DeFriez, D. Smith	29.4	58.2	Cross section on the Dolores River approximately 100 below the Silver Swan site. Flow measurement by flow meter.	
DR-G	7.80	7.7	0.320	1.91	37°38'19.8" N	108°03'36.5" W	10/21/2011	M. DeFriez, D. Smith	22.5	32.3	Cross section on the Dolores River at USGS gauging station #09165000, approximately 3.5 miles downstream of the Silver Swan site	
FB	7.09	15.9	0.0305	1.11	N/A	N/A	10/20/2011	M. DeFriez, D. Smith	NA	NA	Field blank	

TABLE 4 - Analytical Sampling Results Summary September 2011

Metals (ug/L)																								Non-Metals (mg/L, unless otherwise indicated)										Field Parameters					
DR-1: Delores River above St. Louis settling pond system		Date Collected	Fraction	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc	Alkalinity	Hardness (ug/L as CaCO3)	TDS	TSS	Cyanide	Salinity	Sulfate	pH	Temperature (°C)	Conductivity (mS/cm)	Dissolved Oxygen (ppm)			
DR-1	10/20/11	Total	85.5	<0.50	<0.50	<0.50	56.9	<0.20	<0.080	30700	<0.50	93.5	0.12	5620	20.0	<0.20	<0.50	646	<0.50	<0.50	2210	<0.10	0.26	<5.0	90.0	99800	137	<5.0	<0.0050	145	38.4	8.61	2.4	0.390	2.30				
DR-1 D	10/20/11	Dissolved	10.4	<0.50	<0.50	<0.50	57.3	<0.20	<0.080	36300	<0.50	0.63	<5.00	<0.10	5600	17.7	<0.20	1.1	631	<0.50	<0.50	2320	<0.10	0.11	<5.0	-	-	-	-	-	-	-	-	-	-				
DR-2: Delores River immediately above the St. Louis settling pond system outfall		Date Collected	Fraction	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc	Alkalinity	Hardness (ug/L as CaCO3)	TDS	TSS	Cyanide	Salinity	Sulfate	pH	Temperature (°C)	Conductivity (mS/cm)	Dissolved Oxygen (ppm)			
DR-2	10/20/11	Total	83.5	<0.50	<0.50	<0.50	57.2	<0.20	<0.080	36900	<0.50	0.75	105	0.21	6240	97.3	<0.20	<0.50	695	<0.50	<0.50	2450	<0.10	0.25	7.4	84.0	118000	164	<5.0	<0.0050	168	52.8	8.05	6.3	0.349	1.90			
DR-2 D	10/20/11	Dissolved	8.8	<0.50	<0.50	<0.50	55.9	<0.20	<0.080	43200	<0.50	0.88	<5.00	<0.10	6080	90.3	<0.20	0.93	696	<0.50	<0.50	2460	<0.10	<0.10	5.3	-	-	-	-	-	-	-	-	-	-				
DR-3: St. Louis tunnel discharge at adit		Date Collected	Fraction	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc	Alkalinity	Hardness (ug/L as CaCO3)	TDS	TSS	Cyanide	Salinity	Sulfate	pH	Temperature (°C)	Conductivity (mS/cm)	Dissolved Oxygen (ppm)			
DR-3	10/20/11	Total	215	<0.50	<0.50	<0.50	19.1	0.53	18.1	235000	<0.50	27.6	4040	1.3	20000	3530	<0.20	6.2	1620	<0.50	<0.50	9480	<0.10	<0.10	3850	108	668000	917	6.0	<0.0050	726	538	7.40	16.6	1.129	0.98			
DR-3 D	10/20/11	Dissolved	26.5	<0.50	<0.50	<0.50	18.6	0.4	17.1	274000	<0.50	2.6	1050	<0.10	19500	2380	<0.20	6.0	1430	<0.50	<0.50	9250	<0.10	<0.10	3690	-	-	-	-	-	-	-	-	-	-				
DR-4: Discharge of Pond 15		Date Collected	Fraction	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc	Alkalinity	Hardness (ug/L as CaCO3)	TDS	TSS	Cyanide	Salinity	Sulfate	pH	Temperature (°C)	Conductivity (mS/cm)	Dissolved Oxygen (ppm)			
DR-4	10/20/11	Total	150	<0.50	<0.50	<0.50	18.6	0.33	16.6	224000	<0.50	19.1	2730	1.1	19300	2970	<0.20	5.9	1550	<0.50	<0.50	9130	<0.10	<0.10	3520	100	639000	927	<5.0	<0.0050	706	594	7.34	11.7	1.241	1.38			
DR-4 D	10/20/11	Dissolved	4.2	<0.50	<0.50	<0.50	19.0	<0.20	15.4	230000	<0.50	1.1	<5.00	<0.10	19900	2410	<0.20	6.3	1620	<0.50	<0.50	9430	<0.10	<0.10	3230	-	-	-	-	-	-	-	-	-	-				
DR-5: Discharge of Pond 8		Date Collected	Fraction	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc	Alkalinity	Hardness (ug/L as CaCO3)	TDS	TSS	Cyanide	Salinity	Sulfate	pH	Temperature (°C)	Conductivity (mS/cm)	Dissolved Oxygen (ppm)			
DR-5	10/20/11	Total	88.2	<0.50	<0.50	<0.50	18.9	0.21	15.1	271000	0.79	10.7	1340	0.87	20200	2240	<0.20	5.8	1720	<0.50	<0.50	9580	<0.10	<0.10	4020	98.0	761000	934	<5.0	<0.0050	700	612	8.28	12.1	1.120	1.38			
DR-5 D	10/20/11	Dissolved	<4.0	<0.50	<0.50	<0.50	18.7	<0.20	13.8	267000	<0.50	1.0	<5.00	<0.10	20100	2650	<0.20	5.7	1910	<0.50	<0.50	9460	<0.10	<0.10	3280	-	-	-	-	-	-	-	-	-	-				
DR-6: St. Louis settling pond system outfall to the Delores River (Outfall 002)		Date Collected	Fraction	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc	Alkalinity	Hardness (ug/L as CaCO3)	TDS	TSS	Cyanide	Salinity	Sulfate	pH	Temperature (°C)	Conductivity (mS/cm)	Dissolved Oxygen (ppm)			
DR-6	10/20/11	Total	44.0	<0.50	<0.50	<0.50	18.2	<0.20	12.8	246000	<0.50	4.7	586	0.34	21900	2610	<0.20	5.3	2210	<0.50	<0.50	11100	<0.10	<0.10	3650	128	705000	975	<5.0	<0.0050	764	615	7.09	7.9	1.202	1.81			
DR-6 D	10/20/11	Dissolved	<4.0	<0.50	<0.50	<0.50	18.5	<0.20	12.7	243000	<0.50	0.93	<5.00	<0.10	21700	2520	<0.20	5.4	2230	<0.50	<0.50	11000	<0.10	<0.10	3440	-	-	-	-	-	-	-	-	-	-				
DR-7: Delores River below St. Louis settling pond system outfall		Date Collected	Fraction	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc	Alkalinity	Hardness (ug/L as CaCO3)	TDS	TSS	Cyanide	Salinity	Sulfate	pH	Temperature (°C)	Conductivity (mS/cm)	Dissolved Oxygen (ppm)			
DR-7	10/20/11	Total	57.8	<0.50	0.61	53.3	<0.20	1.2	57800	<0.50	0.89	194	0.36	9260	280	<0.20	0.77	1380	<0.50	<0.50	4520	<0.10	0.17	240	108	182000	267	<5.0	<0.0050	271	115	7.95	7.4	0.403	1.86				
DR-7 D	10/20/11	Dissolved	10.1	<0.50	<0.50	53.6	<0.20	1.1	68400	<0.50	0.74	82.3	<0.10	9190	270	<0.20	1.4	1400	<0.50	<0.50	4560	<0.10	<0.10	222	-	-	-	-	-	-	-	-	-	-					
DR-8: St. Louis tunnel discharge at adit (Duplicate of DR-3)																																							

Rico Colorado Surface Water Sampling QC Results - September 2011 Sampling

TABLE 6 - Method Blank

Description	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc	Alkalinity	Hardness	TDS	TSS	Cyanide	Sulfate
QC Sample	MB-1086174	-	MB-898419	MB-899203	MB-900263	MB-902767																						
Units	µg/L	µg/L	-	mg/L	mg/L	mg/L	mg/L																					
Date	11/3/2011	11/3/2011	11/3/2011	11/3/2011	11/3/2011	11/3/2011	11/3/2011	11/3/2011	11/3/2011	11/3/2011	11/3/2011	11/3/2011	11/3/2011	11/3/2011	11/3/2011	11/3/2011	11/3/2011	11/3/2011	11/3/2011	11/3/2011	11/3/2011	-	10/26/2011	10/27/2011	10/28/2011	10/31/2011		
Time	3:58	3:58	3:58	3:58	3:58	3:58	3:58	3:58	3:58	3:58	3:58	3:58	3:58	3:58	3:58	3:58	3:58	3:58	3:58	3:58	3:58	10:00	-	14:56	14:43	14:56	9:59	
Result	ND	ND	-	ND	ND	ND	ND																					
RL	4.0	0.50	0.50	0.30	0.20	0.080	20.0	0.50	0.50	50.0	0.10	5.0	0.50	0.20	0.50	20.0	0.50	0.50	50.0	0.10	5.0	20.0	-	5.0	5.0	0.0050	1.0	
Qualifiers	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Dissolved																												
QC Sample	MB-1086169	-	-	-	-	-	-																					
Units	µg/L	µg/L	-	-	-	-	-	-																				
Date	11/3/2011	11/3/2011	11/3/2011	11/3/2011	11/3/2011	11/3/2011	11/3/2011	11/3/2011	11/3/2011	11/3/2011	11/3/2011	11/3/2011	11/3/2011	11/3/2011	11/3/2011	11/3/2011	11/3/2011	11/3/2011	11/3/2011	11/3/2011	11/3/2011	-	-	-	-	-	-	
Time	15:55	15:55	15:55	15:55	15:55	15:55	15:55	15:55	15:55	12:14	15:55	15:55	15:55	15:55	10:41	15:55	12:14	15:55	15:55	15:55	15:55	-	-	-	-	-	-	
Result	ND	ND	-	-	-	-	-	-																				
RL	4.0	0.50	0.50	0.30	0.20	0.080	20.0	0.50	0.50	50.0	0.10	5.0	0.50	0.20	0.50	20.0	0.50	0.50	50.0	0.10	5.0	-	-	-	-	-	-	
Qualifiers	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Sample Duplicate																												
QC Sample	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	SD-898420	SD-899204	-	-	
Units	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	mg/L	mg/L	-	-	
Original Result	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	868	ND	-	-	
Dup Result	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	898	ND	-	-	
RPD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	
Max RPD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	25	-	-	
Qualifiers	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Sample Duplicate																												
QC Sample	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	SD-899216	SD-899205	-	-	
Units	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	mg/L	mg/L	-	-	
Original Result	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	554	ND	-	-	
Dup Result	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	570	ND	-	-	
RPD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	
Max RPD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	25	-	-	
Qualifiers	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MSD(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine

Rico Colorado Surface Water Sampling QC Results - September 2011 Sampling

TABLE 7 - Laboratory Control Sample

Description	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc	Alkalinity	Hardness	TDS	TSS	Cyanide	Sulfate
QC Sample	LCS-1086175	-	-	-	LCS-900264	LCS-902768																						
Units	µg/L	µg/L	-	-	-	mg/L	mg/L																					
Spike Conc.	80	80	80	80	80	80	80	1000	80	0.08	1000	80	5	80	1000	80	80	1000	80	80	1000	80	500	-	-	0.1	5	
LCS Result	83.9	80.4	77.4	79.5	80.3	79.7	1020	81.9	82.6	1030	87.3	1040	82.3	5.2	81.1	1020	79.9	80.3	996	88.5	80.4	85.0	494	-	-	-	0.092	5.0
LCS % Rec	105	101	97	99	100	100	102	102	103	103	109	104	103	104	101	102	100	100	101	101	106	99	-	-	-	92	100	
% Rec Limits	85-115	85-115	85-115	85-115	85-115	85-115	85-115	85-115	85-115	85-115	85-115	85-115	85-115	85-115	85-115	85-115	85-115	85-115	85-115	85-115	85-115	85-115	85-115	90-110	-	-	69-126	90-110
Qualifiers	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Dissolved																												
QC Sample	LCS-1086170	-	-	-	-	-																						
Units	µg/L	µg/L	-	-	-	-	-																					
Spike Conc.	80	80	80	80	80	80	80	1000	80	0.08	1000	80	5	80	1000	80	80	1000	80	80	1000	80	80	-	-	-	-	-
LCS Result	81.6	80.5	78.2	81.5	83.7	82	1120	81.9	81.8	1060	83	1070	82.5	5.2	83.8	1040	83	86.1	1040	85	82.5	88.6	-	-	-	-	-	
LCS % Rec	102	101	98	102	105	102	112	102	102	106	104	107	103	105	105	104	104	108	104	106	103	111	-	-	-	-	-	
% Rec Limits	85-115	85-115	85-115	85-115	85-115	85-115	85-115	85-115	85-115	85-115	85-115	85-115	85-115	85-115	85-115	85-115	85-115	85-115	85-115	85-115	85-115	85-115	-	-	-	-	-	
Qualifiers	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Sample Duplicate																												
QC Sample	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Units	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Original Result	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Dup Result	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
RPD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Max RPD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Qualifiers	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Sample Duplicate																												
QC Sample	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Units	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Original Result	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Dup Result	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
RPD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Max RPD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Qualifiers	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

DEFINITIONS
DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.
ND - Not Detected at or above adjusted reporting limit.
J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
MDL - Adjusted Method Detection Limit.
S - Surrogate.
1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.
Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.
LCS(D) - Laboratory Control Sample (Duplicate)
MS(D) - Matrix Spike (Duplicate)
DUP - Sample Duplicate
RPD - Relative Percent Difference
NC - Not Calculable.
SG - Silica Gel - Clean-Up
U - Indicates the compound was analyzed for, but not detected.
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.
LABORATORIES
PASI-K Pace Analytical Services - Kansas City
PASI-M Pace Analytical Services - Minneapolis
ANALYTE QUALIFIERS
H6 Analysis initiated more than 15 minutes after sample collection.
M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
M6 Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.
R1 RPD value was outside control limits.



Rico Colorado Surface Water Sampling QC Results - September 2011 Sampling

TABLE 8 - Matrix Spike - Matrix Spike Duplicate

Description	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc	Alkalinity	Hardness	TDS	TSS	Cyanide	Sulfate	
QC Sample	MS-1086176	MS-1085707	MS-1086176	-	-	-	-	-	-	MS-900446																			
Units	µg/L	µg/L	-	-	-	-	-	mg/L																					
Original Result	85.5	ND	ND	56.9	ND	ND	30700	ND	0.74	93.5	0.12	5620	20.0	ND	ND	646	ND	2210	ND	0.26	ND	-	-	-	-	-	-	303	
MS Spike Conc.	80	80	80	80	80	80	1000	80	0.08	1000	80	5	80	1000	80	80	1000	80	80	80	80	-	-	-	-	-	-	100	
MS Result	229	81.4	79.7	137	82.6	81.1	31600	82.4	82.8	1120	87.1	6640	100	4.3	82	1670	82.4	79.4	3180	95	83	88	-	-	-	-	-	-	399
MS % Rec	180	102	99	101	103	101	95	102	103	102	109	102	100	86	102	104	103	101	94	117	102	102	-	-	-	-	-	-	97
% Rec Limits	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	-	-	-	-	-	-	61-119	
RPD	1	2	0.8	0.07	0.5	0.7	0.3	1	0.6	2	0.5	2	3	28	0.5	1	0.5	2	1	1	0.9	2	-	-	-	-	-	-	1
Max RPD	20	20	20	20	20	20	20	20	20	20	20	20	20	30	20	20	20	20	20	20	20	20	-	-	-	-	-	-	10
Qualifiers	M1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
QC Sample	MSD-1086177	MSD-1085708	MSD-1086177	-	-	-	-	-	-	MSD-900447																			
Units	µg/L	µg/L	-	-	-	-	-	-	mg/L																				
Original Result	85.5	ND	ND	56.9	ND	ND	30700	ND	0.74	93.5	0.12	5620	20.0	ND	ND	646	ND	2210	ND	0.26	ND	-	-	-	-	-	-	303	
MSD Spike Conc.	80	80	80	80	80	80	1000	80	0.08	1000	80	5	80	1000	80	80	1000	80	80	80	80	-	-	-	-	-	-	100	
MSD Result	232	81.4	79.7	137	82.2	81	31700	83.2	83.4	1140	87.6	6780	103	5.7	82.4	1670	82.4	79.4	3180	95	83.0	88	-	-	-	-	-	-	394
MSD % Rec	182	100	99	100	103	101	104	103	105	109	117	103	102	103	99	97	119	103	105	105	105	-	-	-	-	-	-	91	
% Rec Limits	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	-	-	-	-	-	-	61-119	
RPD	1	2	0.8	0.07	0.5	0.7	0.3	1	0.6	2	0.5	2	3	28	0.5	1	0.5	2	1	1	0.9	2	-	-	-	-	-	-	1
Max RPD	20	20	20	20	20	20	20	20	20	20	20	20	20	30	20	20	20	20	20	20	20	20	-	-	-	-	-	-	10
Qualifiers	M1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Dissolved																													
QC Sample	MS-1086171	-	-	-	-	-	-	-																					
Units	µg/L	µg/L	-	-	-	-	-	-	-																				
Original Result	10.4	ND	ND	57.3	ND	ND	36300	ND	0.63	ND	ND	5600	17.7	ND	ND	631	ND	2320	ND	0.11	ND	-	-	-	-	-	-	-	
MS Spike Conc.	80	80	80	80	80	80	1000	80	80	1000	80	80	1000	80	80	1000	80	80	1000	80	80	80	-	-	-	-	-	-	
MS Result	95.8	82.2	81.2	140	82.8	83	36600	82	81.6	1050	85.8	6430	99.2	5.4	84.4	1630	81.8	81.2	3300	85.3	80.6	85	-	-	-	-	-	-	-
MSD % Rec	107	103	101	103	104	104	34	102	101	102	107	83	102	107	104	100	102	101	99	107	101	101	-	-	-	-	-	-	-
% Rec Limits	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	-	-	-	-	-	-	-	
RPD	0.8	0.8	0	2	0.7	0.4	2	0.2	0.1	0.6	0.06	3	1	7	3	2	4	0.2	0.06	0.2	0.9	0.6	-	-	-	-	-	-	-
Max RPD	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	-	-	-	-	-	-	-
Qualifiers	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
QC Sample	MSD-1086172	MSD-1086172	MSD-1086172	MSD-1086172	MSD-108617																								

Rico Colorado Surface Water Sampling QC Results - September 2011 Sampling

TABLE 9 - Matrix Spike Sample

Description	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc	Alkalinity	Hardness	TDS	TSS	Cyanide	Sulfate
QC Sample	MSS-1086178	MSS-1085706	MSS-1086178	-	-	-	-	MSS-900265	MSS-900448																			
Units	µg/L	µg/L	-	-	-	-	mg/L	mg/L																				
Original Result	5.5	ND	ND	ND	ND	ND	ND	0.54	ND	ND	-	-	-	-	ND	74.8												
Spike Conc.	80	80	80	80	80	80	80	1000	80	0.08	1000	80	1000	5	80	1000	80	80	1000	80	80	80	-	-	-	-	0.1	25
MSS Result	87.2	80.6	77.5	80.2	83.0	80.1	101	82.8	82.2	1020	89.0	1060	82.4	5.1	81.6	991	79.5	78.6	890	95.7	81.7	85.4	-	-	-	-	0.1	127
MSS % Rec	102	101	97	100	104	100	100	103	102	102	111	106	103	101	101	99	99	98	89	120	102	104	-	-	-	-	104	104
% Rec Limits	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	-	-	-	-	41-136	61-119
Qualifiers	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Dissolved																												
QC Sample	MSS-1086173	MSS-1086060	MSS-1086173	-	-	-	-	-	-																			
Units	µg/L	µg/L	-	-	-	-	-	-																				
Original Result	ND	22.8	ND	ND	-	-	-	-	-	-																		
Spike Conc.	80	80	80	80	80	80	1000	80	80	1000	80	1000	80	5	80	1000	80	80	1000	80	80	80	-	-	-	-	-	-
MSS Result	83.1	80.6	79	82.3	80.3	80.1	1070	80.9	78.6	1040.0	86.8	1060.0	82.7	5.8	81.9	1030.0	79.2	81.4	981.0	87.1	80.9	82.6	-	-	-	-	-	-
MSS % Rec	100	101	99	103	100	100	105	101	98	104	108	106	103	117	102	99	102	98	109	101	101	-	-	-	-	-	-	
% Rec Limits	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	-	-	-	-	-	-	
Qualifiers	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Sample Duplicate																												
QC Sample	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	SD-900266	-
Units	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	mg/L	-
Original Result	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	-
Dup Result	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	-
RPD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Max RPD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26	-
Qualifiers	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MSS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

LABORATORIES

PASI-K Pace Analytical Services - Kansas City

PASI-M Pace Analytical Services - Minneapolis

ANALYTE QUALIFIERS

H6 Analysis initiated more than 15 minutes after sample collection.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

M6 Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

R1 RPD value was outside control limits.



Appendix C

Project Narrative and Laboratory Analytical Reports

November 15, 2011

Mark DeFriez
Anderson Engineering Company I
977 W 2100 S.
Salt Lake City, UT 84119

RE: Project: RICO WATER SAMPLING
Pace Project No.: 60108677

Dear Mark DeFriez:

Enclosed are the analytical results for sample(s) received by the laboratory on October 22, 2011. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Colleen Clyne

colleen.clyne@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414
 A2LA Certification #: 2926.01
 Alaska Certification #: UST-078
 Alaska Certification #MN00064
 Arizona Certification #: AZ-0014
 Arkansas Certification #: 88-0680
 California Certification #: 01155CA
 EPA Region 8 Certification #: Pace
 Florida/NELAP Certification #: E87605
 Georgia Certification #: 959
 Idaho Certification #: MN00064
 Illinois Certification #: 200011
 Iowa Certification #: 368
 Kansas Certification #: E-10167
 Louisiana Certification #: 03086
 Louisiana Certification #: LA080009
 Maine Certification #: 2007029
 Maryland Certification #: 322
 Michigan DEQ Certification #: 9909
 Minnesota Certification #: 027-053-137

Mississippi Certification #: Pace
 Montana Certification #: MT CERT0092
 Nebraska Certification #: Pace
 Nevada Certification #: MN_00064
 New Jersey Certification #: MN-002
 New Mexico Certification #: Pace
 New York Certification #: 11647
 North Carolina Certification #: 530
 North Dakota Certification #: R-036
 North Dakota Certification #: R-036A
 Ohio VAP Certification #: CL101
 Oklahoma Certification #: D9921
 Oklahoma Certification #: 9507
 Oregon Certification #: MN200001
 Pennsylvania Certification #: 68-00563
 Puerto Rico Certification
 Tennessee Certification #: 02818
 Texas Certification #: T104704192
 Washington Certification #: C754
 Wisconsin Certification #: 999407970

Montana Certification IDs

602 South 25th Street, Billings, MT 59101
 EPA Region 8 Certification #: 8TMS-Q
 Idaho Certification #: MT00012

Montana Certification #: MT CERT0040
 NVLAP Certification #: 101292-0
 Minnesota Dept of Health Certification #: 030-999-442

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219
 A2LA Certification #: 2456.01
 Arkansas Certification #: 05-008-0
 Illinois Certification #: 001191
 Iowa Certification #: 118
 Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055
 Nevada Certification #: KS000212008A
 Oklahoma Certification #: 9205/9935
 Texas Certification #: T104704407-08-TX
 Utah Certification #: 9135995665

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SAMPLE SUMMARY

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60108677001	DR-1	Water	10/20/11 10:15	10/22/11 09:30
60108677002	DR-2	Water	10/20/11 11:50	10/22/11 09:30
60108677003	DR-3	Water	10/20/11 09:30	10/22/11 09:30
60108677004	DR-4	Water	10/20/11 10:40	10/22/11 09:30
60108677005	DR-5	Water	10/20/11 11:45	10/22/11 09:30
60108677006	DR-6	Water	10/20/11 12:25	10/22/11 09:30
60108677007	DR-7	Water	10/20/11 12:45	10/22/11 09:30
60108677008	DR-8	Water	10/20/11 09:40	10/22/11 09:30
60108677009	DR-4-SW	Water	10/21/11 11:00	10/22/11 09:30
60108677010	DR-G	Water	10/21/11 11:30	10/22/11 09:30
60108677011	FB	Water	10/20/11 12:15	10/22/11 09:30
60108677012	HT	Water	10/20/11 11:20	10/22/11 09:30
60108677013	GW-AT-2 WATER	Water	10/21/11 13:30	10/22/11 09:30
60108677014	GW-1	Water	10/21/11 08:10	10/22/11 09:30
60108677015	GW-3	Water	10/21/11 08:35	10/22/11 09:30
60108677016	GW-4	Water	10/21/11 08:50	10/22/11 09:30
60108677017	GW-5	Water	10/21/11 09:25	10/22/11 09:30
60108677018	GW-7	Water	10/21/11 09:55	10/22/11 09:30
60108677019	EB-1	Water	10/21/11 09:35	10/22/11 09:30
60108677020	EB-2	Water	10/21/11 10:20	10/22/11 09:30
60108677021	POND-18	Water	10/21/11 11:00	10/22/11 09:30
60108677022	GW-AT-2 SOIL	Solid	10/21/11 13:30	10/22/11 09:30

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SAMPLE ANALYTE COUNT

Project: RICO WATER SAMPLING
Pace Project No.: 60108677

Lab ID	Sample ID	Method	Analysts	Analytics Reported	Laboratory
60108677001	DR-1	EPA 200.8	RJS	22	PASI-M
		EPA 200.8	CJS	21	PASI-M
		EPA 245.1	TEM	1	PASI-M
		EPA 245.1	TEM	1	PASI-M
		SM 2510B	SR1	1	
		Calculated	SR1	2	
		SM 2320B	CMG	3	PASI-K
		SM 2540C	KLB	1	PASI-K
		SM 2540D	KLB	1	PASI-K
		EPA 300.0	JPF	1	PASI-K
60108677002	DR-2	SM 4500-CN-E	SRM1	1	PASI-K
		EPA 200.8	RJS	22	PASI-M
		EPA 200.8	CJS	21	PASI-M
		EPA 245.1	TEM	1	PASI-M
		EPA 245.1	TEM	1	PASI-M
		SM 2510B	SR1	1	
		Calculated	SR1	2	
		SM 2320B	CMG	3	PASI-K
		SM 2540C	KLB	1	PASI-K
		SM 2540D	KLB	1	PASI-K
60108677003	DR-3	EPA 300.0	JPF	1	PASI-K
		SM 4500-CN-E	SRM1	1	PASI-K
		EPA 200.8	CJS, RJS	22	PASI-M
		EPA 200.8	CJS	21	PASI-M
		EPA 245.1	TEM	1	PASI-M
		EPA 245.1	TEM	1	PASI-M
		SM 2510B	SR1	1	
		Calculated	SR1	2	
		SM 2320B	CMG	3	PASI-K
		SM 2540C	KLB	1	PASI-K
60108677004	DR-4	SM 2540D	KLB	1	PASI-K
		EPA 300.0	JPF	1	PASI-K
		SM 4500-CN-E	SRM1	1	PASI-K
		EPA 200.8	CJS, RJS	22	PASI-M
		EPA 200.8	CJS	21	PASI-M

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SAMPLE ANALYTE COUNT

Project: RICO WATER SAMPLING
Pace Project No.: 60108677

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60108677005	DR-5	SM 2510B	SR1	1	
		Calculated	SR1	2	
		SM 2320B	CMG	3	PASI-K
		SM 2540C	KLB	1	PASI-K
		SM 2540D	KLB	1	PASI-K
		EPA 300.0	JPF	1	PASI-K
		SM 4500-CN-E	SRM1	1	PASI-K
		EPA 200.8	CJS, RJS	22	PASI-M
		EPA 200.8	CJS	21	PASI-M
		EPA 245.1	TEM	1	PASI-M
		EPA 245.1	TEM	1	PASI-M
		SM 2510B	SR1	1	
		Calculated	SR1	2	
		SM 2320B	CMG	3	PASI-K
60108677006	DR-6	SM 2540C	KLB	1	PASI-K
		SM 2540D	KLB	1	PASI-K
		EPA 300.0	JPF	1	PASI-K
		SM 4500-CN-E	SRM1	1	PASI-K
		EPA 200.8	CJS, RJS	22	PASI-M
		EPA 200.8	CJS	21	PASI-M
		EPA 245.1	TEM	1	PASI-M
		EPA 245.1	TEM	1	PASI-M
		SM 2510B	SR1	1	
		Calculated	SR1	2	
		SM 2320B	CMG	3	PASI-K
		SM 2540C	KLB	1	PASI-K
		SM 2540D	KLB	1	PASI-K
		EPA 300.0	JPF	1	PASI-K
60108677007	DR-7	SM 4500-CN-E	SRM1	1	PASI-K
		EPA 200.8	RJS	22	PASI-M
		EPA 200.8	CJS	21	PASI-M
		EPA 245.1	TEM	1	PASI-M
		EPA 245.1	TEM	1	PASI-M
		SM 2510B	SR1	1	
		Calculated	SR1	2	
		SM 2320B	CMG	3	PASI-K
		SM 2540C	KLB	1	PASI-K

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SAMPLE ANALYTE COUNT

Project: RICO WATER SAMPLING
Pace Project No.: 60108677

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60108677008	DR-8	SM 2540D	KLB	1	PASI-K
		EPA 300.0	JPF	1	PASI-K
		SM 4500-CN-E	SRM1	1	PASI-K
		EPA 200.8	CJS, RJS	22	PASI-M
		EPA 200.8	CJS	21	PASI-M
		EPA 245.1	TEM	1	PASI-M
		EPA 245.1	TEM	1	PASI-M
		SM 2510B	SR1	1	PASI-K
		Calculated	SR1	2	PASI-K
		SM 2320B	CMG	3	PASI-K
		SM 2540C	KLB	1	PASI-K
		SM 2540D	KLB	1	PASI-K
		EPA 300.0	JPF	1	PASI-K
60108677009	DR-4-SW	SM 4500-CN-E	SRM1	1	PASI-K
		EPA 200.8	RJS	22	PASI-M
		EPA 200.8	CJS	21	PASI-M
		EPA 245.1	TEM	1	PASI-M
		EPA 245.1	TEM	1	PASI-M
		SM 2510B	SR1	1	PASI-K
		Calculated	SR1	2	PASI-K
		SM 2320B	CMG	3	PASI-K
		SM 2540C	KLB	1	PASI-K
		SM 2540D	KLB	1	PASI-K
		EPA 300.0	JPF	1	PASI-K
		SM 4500-CN-E	SRM1	1	PASI-K
60108677010	DR-G	EPA 200.8	RJS	22	PASI-M
		EPA 200.8	CJS	21	PASI-M
		EPA 245.1	TEM	1	PASI-M
		EPA 245.1	TEM	1	PASI-M
		SM 2510B	SR1	1	PASI-K
		Calculated	SR1	2	PASI-K
		SM 2320B	AJM	3	PASI-K
		SM 2540C	KLB	1	PASI-K
		SM 2540D	KLB	1	PASI-K
		EPA 300.0	JPF	1	PASI-K
		SM 4500-CN-E	SRM1	1	PASI-K
		EPA 200.8	RJS	22	PASI-M
60108677011	FB				

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SAMPLE ANALYTE COUNT

Project: RICO WATER SAMPLING
Pace Project No.: 60108677

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60108677012	HT	EPA 200.8	CJS	21	PASI-M
		EPA 245.1	TEM	1	PASI-M
		EPA 245.1	TEM	1	PASI-M
		SM 2510B	SR1	1	
		Calculated	SR1	2	
		SM 2320B	CMG	3	PASI-K
		SM 2540C	KLB	1	PASI-K
		SM 2540D	KLB	1	PASI-K
		EPA 300.0	JPF	1	PASI-K
		SM 4500-CN-E	SRM1	1	PASI-K
		EPA 200.8	CJS	22	PASI-M
		EPA 200.8	CJS	21	PASI-M
		EPA 245.1	TEM	1	PASI-M
		EPA 245.1	TEM	1	PASI-M
60108677013	GW-AT-2 WATER	SM 2510B	SR1	1	
		Calculated	SR1	2	
		SM 2320B	CMG	3	PASI-K
		SM 2540C	KLB	1	PASI-K
		SM 2540D	KLB	1	PASI-K
		EPA 300.0	JPF	1	PASI-K
		SM 4500-CN-E	SRM1	1	PASI-K
		EPA 200.8	CJS	22	PASI-M
		EPA 245.1	TEM	1	PASI-M
60108677014	GW-1	EPA 200.8	CJS	22	PASI-M
		EPA 200.8	CJS	21	PASI-M
		EPA 245.1	TEM	1	PASI-M
		EPA 245.1	TEM	1	PASI-M
		SM 2510B	SR1	1	
		Calculated	SR1	2	
		SM 2320B	AJM	3	PASI-K
		SM 2540C	KLB	1	PASI-K
		SM 2540D	KLB	1	PASI-K
		EPA 300.0	JPF	1	PASI-K
60108677015	GW-3	SM 4500-CN-E	SRM1	1	PASI-K
		EPA 200.8	CJS	22	PASI-M
		EPA 200.8	CJS	21	PASI-M
		EPA 245.1	TEM	1	PASI-M

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SAMPLE ANALYTE COUNT

Project: RICO WATER SAMPLING
Pace Project No.: 60108677

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60108677016	GW-4	EPA 245.1	TEM	1	PASI-M
		SM 2510B	SR1	1	
		Calculated	SR1	2	
		SM 2320B	AJM	3	PASI-K
		SM 2540C	KLB	1	PASI-K
		SM 2540D	KLB	1	PASI-K
		EPA 300.0	JPF	1	PASI-K
		SM 4500-CN-E	SRM1	1	PASI-K
		EPA 200.8	CJS	22	PASI-M
		EPA 200.8	CJS	21	PASI-M
		EPA 245.1	TEM	1	PASI-M
		EPA 245.1	TEM	1	PASI-M
		SM 2510B	SR1	1	
		Calculated	SR1	2	
60108677017	GW-5	SM 2320B	AJM	3	PASI-K
		SM 2540C	KLB	1	PASI-K
		SM 2540D	KLB	1	PASI-K
		EPA 300.0	JPF	1	PASI-K
		SM 4500-CN-E	SRM1	1	PASI-K
		EPA 200.8	CJS	22	PASI-M
		EPA 200.8	CJS	21	PASI-M
		EPA 245.1	TEM	1	PASI-M
		EPA 245.1	TEM	1	PASI-M
		SM 2510B	SR1	1	
		Calculated	SR1	2	
		SM 2320B	AJM	3	PASI-K
		SM 2540C	KLB	1	PASI-K
		SM 2540D	KLB	1	PASI-K
60108677018	GW-7	EPA 300.0	JPF	1	PASI-K
		SM 4500-CN-E	SRM1	1	PASI-K
		EPA 200.8	CJS	22	PASI-M
		EPA 200.8	CJS	21	PASI-M
		EPA 245.1	TEM	1	PASI-M
		EPA 245.1	TEM	1	PASI-M
		SM 2510B	SR1	1	
		Calculated	SR1	2	

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SAMPLE ANALYTE COUNT

Project: RICO WATER SAMPLING
Pace Project No.: 60108677

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60108677019	EB-1	SM 2540C	KLB	1	PASI-K
		SM 2540D	KLB	1	PASI-K
		EPA 300.0	JPF	1	PASI-K
		SM 4500-CN-E	SRM1	1	PASI-K
		EPA 200.8	CJS	22	PASI-M
		EPA 200.8	CJS	21	PASI-M
		EPA 245.1	TEM	1	PASI-M
		EPA 245.1	TEM	1	PASI-M
		SM 2510B	SR1	1	
		Calculated	SR1	2	
		SM 2320B	AJM	3	PASI-K
		SM 2540C	KLB	1	PASI-K
		SM 2540D	KLB	1	PASI-K
		EPA 300.0	JPF	1	PASI-K
		SM 4500-CN-E	SRM1	1	PASI-K
60108677020	EB-2	EPA 200.8	CJS	22	PASI-M
		EPA 200.8	CJS	21	PASI-M
		EPA 245.1	TEM	1	PASI-M
		EPA 245.1	TEM	1	PASI-M
		SM 2510B	SR1	1	
		Calculated	SR1	2	
		SM 2320B	AJM	3	PASI-K
		SM 2540C	KLB	1	PASI-K
		SM 2540D	KLB	1	PASI-K
		SM 4500-H+B	CMG	1	PASI-K
		EPA 300.0	JPF	1	PASI-K
		SM 4500-CN-E	SRM1	1	PASI-K
60108677021	POND-18	EPA 200.8	RJS	22	PASI-M
		EPA 200.8	CJS	21	PASI-M
		EPA 245.1	TEM	1	PASI-M
		EPA 245.1	TEM	1	PASI-M
		SM 2510B	SR1	1	
		Calculated	SR1	2	
		SM 2320B	AJM	3	PASI-K
		SM 2540C	KLB	1	PASI-K
		SM 2540D	KLB	1	PASI-K
		EPA 300.0	JPF	1	PASI-K

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SAMPLE ANALYTE COUNT

Project: RICO WATER SAMPLING
Pace Project No.: 60108677

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60108677022	GW-AT-2 SOIL	SM 4500-CN-E	SRM1	1	PASI-K
		EPA 6020	CJS	21	PASI-M
		EPA 7471	TEM	1	PASI-M

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PROJECT NARRATIVE

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

Method: EPA 200.8

Description: 200.8 MET ICPMS

Client: BP Anderson Engineering Company Inc.

Date: November 15, 2011

General Information:

21 samples were analyzed for EPA 200.8. All samples were received in acceptable condition with any exceptions noted below.

TP: The samples were received outside of required temperature range. Analysis was completed upon client approval.

- DR-1 (Lab ID: 60108677001)
- DR-2 (Lab ID: 60108677002)
- DR-3 (Lab ID: 60108677003)
- DR-4 (Lab ID: 60108677004)
- DR-4-SW (Lab ID: 60108677009)
- DR-5 (Lab ID: 60108677005)
- DR-6 (Lab ID: 60108677006)
- DR-7 (Lab ID: 60108677007)
- DR-8 (Lab ID: 60108677008)
- DR-G (Lab ID: 60108677010)
- EB-1 (Lab ID: 60108677019)
- EB-2 (Lab ID: 60108677020)
- FB (Lab ID: 60108677011)
- GW-1 (Lab ID: 60108677014)
- GW-3 (Lab ID: 60108677015)
- GW-4 (Lab ID: 60108677016)
- GW-5 (Lab ID: 60108677017)
- GW-7 (Lab ID: 60108677018)
- GW-AT-2 WATER (Lab ID: 60108677013)
- HT (Lab ID: 60108677012)
- POND-18 (Lab ID: 60108677021)

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

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PROJECT NARRATIVE

Project: RICO WATER SAMPLING
Pace Project No.: 60108677

Method: EPA 200.8

Description: 200.8 MET ICPMS

Client: BP Anderson Engineering Company Inc.

Date: November 15, 2011

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: ICPM/29325

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60108677001,60108677011

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1086176)
 - Aluminum
- MSD (Lab ID: 1086177)
 - Aluminum

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

Method: **EPA 200.8**

Description: 200.8 MET ICPMS, Dissolved

Client: BP Anderson Engineering Company Inc.

Date: November 15, 2011

General Information:

20 samples were analyzed for EPA 200.8. All samples were received in acceptable condition with any exceptions noted below.

TP: The samples were received outside of required temperature range. Analysis was completed upon client approval.

- DR-1 (Lab ID: 60108677001)
- DR-2 (Lab ID: 60108677002)
- DR-3 (Lab ID: 60108677003)
- DR-4 (Lab ID: 60108677004)
- DR-4-SW (Lab ID: 60108677009)
- DR-5 (Lab ID: 60108677005)
- DR-6 (Lab ID: 60108677006)
- DR-7 (Lab ID: 60108677007)
- DR-8 (Lab ID: 60108677008)
- DR-G (Lab ID: 60108677010)
- EB-1 (Lab ID: 60108677019)
- EB-2 (Lab ID: 60108677020)
- FB (Lab ID: 60108677011)
- GW-1 (Lab ID: 60108677014)
- GW-3 (Lab ID: 60108677015)
- GW-4 (Lab ID: 60108677016)
- GW-5 (Lab ID: 60108677017)
- GW-7 (Lab ID: 60108677018)
- HT (Lab ID: 60108677012)
- POND-18 (Lab ID: 60108677021)

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

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PROJECT NARRATIVE

Project: RICO WATER SAMPLING
Pace Project No.: 60108677

Method: EPA 200.8

Description: 200.8 MET ICPMS, Dissolved

Client: BP Anderson Engineering Company Inc.

Date: November 15, 2011

QC Batch: ICPM/29324

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60108677001, 60108677011

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1086171)
 - Calcium, Dissolved
- MSD (Lab ID: 1086172)
 - Calcium, Dissolved
 - Magnesium, Dissolved

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: RICO WATER SAMPLING
Pace Project No.: 60108677

Method: EPA 6020
Description: 6020 MET ICPMS
Client: BP Anderson Engineering Company Inc.
Date: November 15, 2011

General Information:

1 sample was analyzed for EPA 6020. All samples were received in acceptable condition with any exceptions noted below.

TP: The samples were received outside of required temperature range. Analysis was completed upon client approval.
• GW-AT-2 SOIL (Lab ID: 60108677022)

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

Method: EPA 245.1

Description: 245.1 Mercury

Client: BP Anderson Engineering Company Inc.

Date: November 15, 2011

General Information:

21 samples were analyzed for EPA 245.1. All samples were received in acceptable condition with any exceptions noted below.

TP: The samples were received outside of required temperature range. Analysis was completed upon client approval.

- DR-1 (Lab ID: 60108677001)
- DR-2 (Lab ID: 60108677002)
- DR-3 (Lab ID: 60108677003)
- DR-4 (Lab ID: 60108677004)
- DR-4-SW (Lab ID: 60108677009)
- DR-5 (Lab ID: 60108677005)
- DR-6 (Lab ID: 60108677006)
- DR-7 (Lab ID: 60108677007)
- DR-8 (Lab ID: 60108677008)
- DR-G (Lab ID: 60108677010)
- EB-1 (Lab ID: 60108677019)
- EB-2 (Lab ID: 60108677020)
- FB (Lab ID: 60108677011)
- GW-1 (Lab ID: 60108677014)
- GW-3 (Lab ID: 60108677015)
- GW-4 (Lab ID: 60108677016)
- GW-5 (Lab ID: 60108677017)
- GW-7 (Lab ID: 60108677018)
- GW-AT-2 WATER (Lab ID: 60108677013)
- HT (Lab ID: 60108677012)
- POND-18 (Lab ID: 60108677021)

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

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PROJECT NARRATIVE

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

Method: EPA 245.1

Description: 245.1 Mercury

Client: BP Anderson Engineering Company Inc.

Date: November 15, 2011

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

Method: EPA 245.1

Description: 245.1 Mercury, Dissolved

Client: BP Anderson Engineering Company Inc.

Date: November 15, 2011

General Information:

20 samples were analyzed for EPA 245.1. All samples were received in acceptable condition with any exceptions noted below.

TP: The samples were received outside of required temperature range. Analysis was completed upon client approval.

- DR-1 (Lab ID: 60108677001)
- DR-2 (Lab ID: 60108677002)
- DR-3 (Lab ID: 60108677003)
- DR-4 (Lab ID: 60108677004)
- DR-4-SW (Lab ID: 60108677009)
- DR-5 (Lab ID: 60108677005)
- DR-6 (Lab ID: 60108677006)
- DR-7 (Lab ID: 60108677007)
- DR-8 (Lab ID: 60108677008)
- DR-G (Lab ID: 60108677010)
- EB-1 (Lab ID: 60108677019)
- EB-2 (Lab ID: 60108677020)
- FB (Lab ID: 60108677011)
- GW-1 (Lab ID: 60108677014)
- GW-3 (Lab ID: 60108677015)
- GW-4 (Lab ID: 60108677016)
- GW-5 (Lab ID: 60108677017)
- GW-7 (Lab ID: 60108677018)
- HT (Lab ID: 60108677012)
- POND-18 (Lab ID: 60108677021)

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

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PROJECT NARRATIVE

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

Method: EPA 245.1

Description: 245.1 Mercury, Dissolved

Client: BP Anderson Engineering Company Inc.

Date: November 15, 2011

QC Batch: MERC/6144

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 60108677001,60108677021

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1086060)
- Mercury, Dissolved

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: RICO WATER SAMPLING
Pace Project No.: 60108677

Method: EPA 7471
Description: 7471 Mercury
Client: BP Anderson Engineering Company Inc.
Date: November 15, 2011

General Information:

1 sample was analyzed for EPA 7471. All samples were received in acceptable condition with any exceptions noted below.

TP: The samples were received outside of required temperature range. Analysis was completed upon client approval.
• GW-AT-2 SOIL (Lab ID: 60108677022)

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: RICO WATER SAMPLING
Pace Project No.: 60108677

Method: **SM 2510B**

Description: 2510B Specific Conductance
Client: BP Anderson Engineering Company Inc.
Date: November 15, 2011

General Information:

20 samples were analyzed for SM 2510B. All samples were received in acceptable condition with any exceptions noted below.

TP: The samples were received outside of required temperature range. Analysis was completed upon client approval.

- DR-1 (Lab ID: 60108677001)
- DR-2 (Lab ID: 60108677002)
- DR-3 (Lab ID: 60108677003)
- DR-4 (Lab ID: 60108677004)
- DR-4-SW (Lab ID: 60108677009)
- DR-5 (Lab ID: 60108677005)
- DR-6 (Lab ID: 60108677006)
- DR-7 (Lab ID: 60108677007)
- DR-8 (Lab ID: 60108677008)
- DR-G (Lab ID: 60108677010)
- EB-1 (Lab ID: 60108677019)
- EB-2 (Lab ID: 60108677020)
- FB (Lab ID: 60108677011)
- GW-1 (Lab ID: 60108677014)
- GW-3 (Lab ID: 60108677015)
- GW-4 (Lab ID: 60108677016)
- GW-5 (Lab ID: 60108677017)
- GW-7 (Lab ID: 60108677018)
- HT (Lab ID: 60108677012)
- POND-18 (Lab ID: 60108677021)

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

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PROJECT NARRATIVE

Project: RICO WATER SAMPLING
Pace Project No.: 60108677

Method: **SM 2510B**

Description: 2510B Specific Conductance
Client: BP Anderson Engineering Company Inc.
Date: November 15, 2011

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: RICO WATER SAMPLING
Pace Project No.: 60108677

Method: Calculated

Description: Salinity

Client: BP Anderson Engineering Company Inc.

Date: November 15, 2011

General Information:

20 samples were analyzed for Calculated. All samples were received in acceptable condition with any exceptions noted below.

TP: The samples were received outside of required temperature range. Analysis was completed upon client approval.

- DR-1 (Lab ID: 60108677001)
- DR-2 (Lab ID: 60108677002)
- DR-3 (Lab ID: 60108677003)
- DR-4 (Lab ID: 60108677004)
- DR-4-SW (Lab ID: 60108677009)
- DR-5 (Lab ID: 60108677005)
- DR-6 (Lab ID: 60108677006)
- DR-7 (Lab ID: 60108677007)
- DR-8 (Lab ID: 60108677008)
- DR-G (Lab ID: 60108677010)
- EB-1 (Lab ID: 60108677019)
- EB-2 (Lab ID: 60108677020)
- FB (Lab ID: 60108677011)
- GW-1 (Lab ID: 60108677014)
- GW-3 (Lab ID: 60108677015)
- GW-4 (Lab ID: 60108677016)
- GW-5 (Lab ID: 60108677017)
- GW-7 (Lab ID: 60108677018)
- HT (Lab ID: 60108677012)
- POND-18 (Lab ID: 60108677021)

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

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PROJECT NARRATIVE

Project: RICO WATER SAMPLING
Pace Project No.: 60108677

Method: Calculated

Description: Salinity

Client: BP Anderson Engineering Company Inc.

Date: November 15, 2011

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

Method: **SM 2320B**

Description: 2320B Alkalinity

Client: BP Anderson Engineering Company Inc.

Date: November 15, 2011

General Information:

20 samples were analyzed for SM 2320B. All samples were received in acceptable condition with any exceptions noted below.

TP: The samples were received outside of required temperature range. Analysis was completed upon client approval.

- DR-1 (Lab ID: 60108677001)
- DR-2 (Lab ID: 60108677002)
- DR-3 (Lab ID: 60108677003)
- DR-4 (Lab ID: 60108677004)
- DR-4-SW (Lab ID: 60108677009)
- DR-5 (Lab ID: 60108677005)
- DR-6 (Lab ID: 60108677006)
- DR-7 (Lab ID: 60108677007)
- DR-8 (Lab ID: 60108677008)
- DR-G (Lab ID: 60108677010)
- EB-1 (Lab ID: 60108677019)
- EB-2 (Lab ID: 60108677020)
- FB (Lab ID: 60108677011)
- GW-1 (Lab ID: 60108677014)
- GW-3 (Lab ID: 60108677015)
- GW-4 (Lab ID: 60108677016)
- GW-5 (Lab ID: 60108677017)
- GW-7 (Lab ID: 60108677018)
- HT (Lab ID: 60108677012)
- POND-18 (Lab ID: 60108677021)

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

QC Batch: WET/31808

R1: RPD value was outside control limits.

- DUP (Lab ID: 902841)
- Alkalinity,Bicarbonate (CaCO₃)

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PROJECT NARRATIVE

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

Method: **SM 2320B**

Description: 2320B Alkalinity

Client: BP Anderson Engineering Company Inc.

Date: November 15, 2011

Additional Comments:

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PROJECT NARRATIVE

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

Method: SM 2540C

Description: 2540C Total Dissolved Solids

Client: BP Anderson Engineering Company Inc.

Date: November 15, 2011

General Information:

20 samples were analyzed for SM 2540C. All samples were received in acceptable condition with any exceptions noted below.

TP: The samples were received outside of required temperature range. Analysis was completed upon client approval.

- DR-1 (Lab ID: 60108677001)
- DR-2 (Lab ID: 60108677002)
- DR-3 (Lab ID: 60108677003)
- DR-4 (Lab ID: 60108677004)
- DR-4-SW (Lab ID: 60108677009)
- DR-5 (Lab ID: 60108677005)
- DR-6 (Lab ID: 60108677006)
- DR-7 (Lab ID: 60108677007)
- DR-8 (Lab ID: 60108677008)
- DR-G (Lab ID: 60108677010)
- EB-1 (Lab ID: 60108677019)
- EB-2 (Lab ID: 60108677020)
- FB (Lab ID: 60108677011)
- GW-1 (Lab ID: 60108677014)
- GW-3 (Lab ID: 60108677015)
- GW-4 (Lab ID: 60108677016)
- GW-5 (Lab ID: 60108677017)
- GW-7 (Lab ID: 60108677018)
- HT (Lab ID: 60108677012)
- POND-18 (Lab ID: 60108677021)

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: RICO WATER SAMPLING
Pace Project No.: 60108677

Method: **SM 2540D**

Description: 2540D Total Suspended Solids
Client: BP Anderson Engineering Company Inc.
Date: November 15, 2011

General Information:

20 samples were analyzed for SM 2540D. All samples were received in acceptable condition with any exceptions noted below.

TP: The samples were received outside of required temperature range. Analysis was completed upon client approval.

- DR-1 (Lab ID: 60108677001)
- DR-2 (Lab ID: 60108677002)
- DR-3 (Lab ID: 60108677003)
- DR-4 (Lab ID: 60108677004)
- DR-4-SW (Lab ID: 60108677009)
- DR-5 (Lab ID: 60108677005)
- DR-6 (Lab ID: 60108677006)
- DR-7 (Lab ID: 60108677007)
- DR-8 (Lab ID: 60108677008)
- DR-G (Lab ID: 60108677010)
- EB-1 (Lab ID: 60108677019)
- EB-2 (Lab ID: 60108677020)
- FB (Lab ID: 60108677011)
- GW-1 (Lab ID: 60108677014)
- GW-3 (Lab ID: 60108677015)
- GW-4 (Lab ID: 60108677016)
- GW-5 (Lab ID: 60108677017)
- GW-7 (Lab ID: 60108677018)
- HT (Lab ID: 60108677012)
- POND-18 (Lab ID: 60108677021)

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

Method: SM 4500-H+B

Description: 4500H+ pH, Electrometric

Client: BP Anderson Engineering Company Inc.

Date: November 15, 2011

General Information:

1 sample was analyzed for SM 4500-H+B. All samples were received in acceptable condition with any exceptions noted below.

TP: The samples were received outside of required temperature range. Analysis was completed upon client approval.

- EB-2 (Lab ID: 60108677020)

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

H6: Analysis initiated more than 15 minutes after sample collection.

- EB-2 (Lab ID: 60108677020)

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

Method: EPA 300.0

Description: 300.0 IC Anions 28 Days

Client: BP Anderson Engineering Company Inc.

Date: November 15, 2011

General Information:

20 samples were analyzed for EPA 300.0. All samples were received in acceptable condition with any exceptions noted below.

TP: The samples were received outside of required temperature range. Analysis was completed upon client approval.

- DR-1 (Lab ID: 60108677001)
- DR-2 (Lab ID: 60108677002)
- DR-3 (Lab ID: 60108677003)
- DR-4 (Lab ID: 60108677004)
- DR-4-SW (Lab ID: 60108677009)
- DR-5 (Lab ID: 60108677005)
- DR-6 (Lab ID: 60108677006)
- DR-7 (Lab ID: 60108677007)
- DR-8 (Lab ID: 60108677008)
- DR-G (Lab ID: 60108677010)
- EB-1 (Lab ID: 60108677019)
- EB-2 (Lab ID: 60108677020)
- FB (Lab ID: 60108677011)
- GW-1 (Lab ID: 60108677014)
- GW-3 (Lab ID: 60108677015)
- GW-4 (Lab ID: 60108677016)
- GW-5 (Lab ID: 60108677017)
- GW-7 (Lab ID: 60108677018)
- HT (Lab ID: 60108677012)
- POND-18 (Lab ID: 60108677021)

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

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PROJECT NARRATIVE

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

Method: EPA 300.0

Description: 300.0 IC Anions 28 Days

Client: BP Anderson Engineering Company Inc.

Date: November 15, 2011

Additional Comments:

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PROJECT NARRATIVE

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

Method: SM 4500-CN-E

Description: 4500CNE Cyanide, Total

Client: BP Anderson Engineering Company Inc.

Date: November 15, 2011

General Information:

20 samples were analyzed for SM 4500-CN-E. All samples were received in acceptable condition with any exceptions noted below.

TP: The samples were received outside of required temperature range. Analysis was completed upon client approval.

- DR-1 (Lab ID: 60108677001)
- DR-2 (Lab ID: 60108677002)
- DR-3 (Lab ID: 60108677003)
- DR-4 (Lab ID: 60108677004)
- DR-4-SW (Lab ID: 60108677009)
- DR-5 (Lab ID: 60108677005)
- DR-6 (Lab ID: 60108677006)
- DR-7 (Lab ID: 60108677007)
- DR-8 (Lab ID: 60108677008)
- DR-G (Lab ID: 60108677010)
- EB-1 (Lab ID: 60108677019)
- EB-2 (Lab ID: 60108677020)
- FB (Lab ID: 60108677011)
- GW-1 (Lab ID: 60108677014)
- GW-3 (Lab ID: 60108677015)
- GW-4 (Lab ID: 60108677016)
- GW-5 (Lab ID: 60108677017)
- GW-7 (Lab ID: 60108677018)
- HT (Lab ID: 60108677012)
- POND-18 (Lab ID: 60108677021)

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

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PROJECT NARRATIVE

Project: RICO WATER SAMPLING
Pace Project No.: 60108677

Method: SM 4500-CN-E
Description: 4500CNE Cyanide, Total
Client: BP Anderson Engineering Company Inc.
Date: November 15, 2011

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

Sample: DR-1 **Lab ID: 60108677001** Collected: 10/20/11 10:15 Received: 10/22/11 09:30 Matrix: Water

Comments: • The samples were received outside of required temperature range. Analysis was completed upon client approval.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS		Analytical Method: EPA 200.8						
Aluminum	85.5 ug/L		4.0	1	10/28/11 08:24	11/03/11 03:30	7429-90-5	M1
Antimony	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 03:30	7440-36-0	
Arsenic	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 03:30	7440-38-2	
Barium	56.9 ug/L		0.30	1	10/28/11 08:24	11/03/11 03:30	7440-39-3	
Beryllium	ND ug/L		0.20	1	10/28/11 08:24	11/03/11 03:30	7440-41-7	
Cadmium	ND ug/L		0.080	1	10/28/11 08:24	11/03/11 03:30	7440-43-9	
Calcium	30700 ug/L		100	5	10/28/11 08:24	11/03/11 03:44	7440-70-2	
Chromium	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 03:30	7440-47-3	
Copper	0.74 ug/L		0.50	1	10/28/11 08:24	11/03/11 03:30	7440-50-8	
Iron	93.5 ug/L		50.0	1	10/28/11 08:24	11/03/11 03:30	7439-89-6	
Lead	0.12 ug/L		0.10	1	10/28/11 08:24	11/03/11 03:30	7439-92-1	
Magnesium	5620 ug/L		5.0	1	10/28/11 08:24	11/03/11 03:30	7439-95-4	
Manganese	20.0 ug/L		0.50	1	10/28/11 08:24	11/03/11 03:30	7439-96-5	
Nickel	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 03:30	7440-02-0	
Potassium	646 ug/L		20.0	1	10/28/11 08:24	11/03/11 03:30	7440-09-7	
Selenium	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 03:30	7782-49-2	
Silver	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 03:30	7440-22-4	
Sodium	2210 ug/L		50.0	1	10/28/11 08:24	11/03/11 03:30	7440-23-5	
Thallium	ND ug/L		0.10	1	10/28/11 08:24	11/03/11 03:30	7440-28-0	
Total Hardness by 2340B	99800 ug/L		355	5	10/28/11 08:24	11/03/11 03:44		
Vanadium	0.26 ug/L		0.10	1	10/28/11 08:24	11/03/11 03:30	7440-62-2	
Zinc	ND ug/L		5.0	1	10/28/11 08:24	11/03/11 03:30	7440-66-6	
200.8 MET ICPMS, Dissolved		Analytical Method: EPA 200.8						
Aluminum, Dissolved	10.4 ug/L		4.0	1	10/28/11 08:22	11/03/11 16:05	7429-90-5	
Antimony, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 16:05	7440-36-0	
Arsenic, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 16:05	7440-38-2	
Barium, Dissolved	57.3 ug/L		0.30	1	10/28/11 08:22	11/03/11 16:05	7440-39-3	
Beryllium, Dissolved	ND ug/L		0.20	1	10/28/11 08:22	11/03/11 16:05	7440-41-7	
Cadmium, Dissolved	ND ug/L		0.080	1	10/28/11 08:22	11/03/11 16:05	7440-43-9	
Calcium, Dissolved	36300 ug/L		100	5	10/28/11 08:22	11/04/11 12:23	7440-70-2	M1
Chromium, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 16:05	7440-47-3	
Copper, Dissolved	0.63 ug/L		0.50	1	10/28/11 08:22	11/03/11 16:05	7440-50-8	
Iron, Dissolved	ND ug/L		50.0	1	10/28/11 08:22	11/03/11 16:05	7439-89-6	
Lead, Dissolved	ND ug/L		0.10	1	10/28/11 08:22	11/03/11 16:05	7439-92-1	
Magnesium, Dissolved	5600 ug/L		5.0	1	10/28/11 08:22	11/03/11 16:05	7439-95-4	M1
Manganese, Dissolved	17.7 ug/L		0.50	1	10/28/11 08:22	11/03/11 16:05	7439-96-5	
Nickel, Dissolved	1.1 ug/L		0.50	1	10/28/11 08:22	11/03/11 16:05	7440-02-0	
Potassium, Dissolved	631 ug/L		100	5	10/28/11 08:22	11/04/11 12:23	7440-09-7	
Selenium, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 16:05	7782-49-2	
Silver, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 16:05	7440-22-4	
Sodium, Dissolved	2320 ug/L		50.0	1	10/28/11 08:22	11/03/11 16:05	7440-23-5	
Thallium, Dissolved	ND ug/L		0.10	1	10/28/11 08:22	11/03/11 16:05	7440-28-0	
Vanadium, Dissolved	0.11 ug/L		0.10	1	10/28/11 08:22	11/03/11 16:05	7440-62-2	
Zinc, Dissolved	ND ug/L		5.0	1	10/28/11 08:22	11/03/11 16:05	7440-66-6	

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ANALYTICAL RESULTS

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

Sample: DR-1 **Lab ID: 60108677001** Collected: 10/20/11 10:15 Received: 10/22/11 09:30 Matrix: Water

Comments: • The samples were received outside of required temperature range. Analysis was completed upon client approval.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
245.1 Mercury	Analytical Method: EPA 245.1							
Mercury	ND	ug/L	0.20	1	10/27/11 13:03	10/28/11 14:10	7439-97-6	
245.1 Mercury, Dissolved	Analytical Method: EPA 245.1							
Mercury, Dissolved	ND	ug/L	0.20	1	10/31/11 12:27	11/01/11 10:45	7439-97-6	
2510B Specific Conductance	Analytical Method: SM 2510B							
Specific Conductance	226	umhos/cm	10.0	1		10/27/11 10:24		
Salinity	Analytical Method: Calculated							
Salinity (as dissolved solids)	145	mg/L	6.0	1		10/27/11 16:20		
Salinity (as seawater)	0.11	PSU	0.010	1		10/27/11 16:20		
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity,Bicarbonate (CaCO ₃)	90.0	mg/L	20.0	1		11/01/11 10:00		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	20.0	1		11/01/11 10:00		
Alkalinity, Total as CaCO ₃	90.0	mg/L	20.0	1		11/01/11 10:00		
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	137	mg/L	5.0	1		10/26/11 15:00		
2540D Total Suspended Solids	Analytical Method: SM 2540D							
Total Suspended Solids	ND	mg/L	5.0	1		10/27/11 14:44		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	38.4	mg/L	5.0	5		10/29/11 07:12	14808-79-8	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E							
Cyanide	ND	mg/L	0.0050	1		10/28/11 14:59	57-12-5	

ANALYTICAL RESULTS

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

Sample: DR-2 **Lab ID: 60108677002** Collected: 10/20/11 11:50 Received: 10/22/11 09:30 Matrix: Water

Comments: • The samples were received outside of required temperature range. Analysis was completed upon client approval.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS		Analytical Method: EPA 200.8						
Aluminum	83.5 ug/L		4.0	1	10/28/11 08:24	11/03/11 04:07	7429-90-5	
Antimony	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 04:07	7440-36-0	
Arsenic	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 04:07	7440-38-2	
Barium	57.2 ug/L		0.30	1	10/28/11 08:24	11/03/11 04:07	7440-39-3	
Beryllium	ND ug/L		0.20	1	10/28/11 08:24	11/03/11 04:07	7440-41-7	
Cadmium	ND ug/L		0.080	1	10/28/11 08:24	11/03/11 04:07	7440-43-9	
Calcium	36900 ug/L		100	5	10/28/11 08:24	11/03/11 04:12	7440-70-2	
Chromium	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 04:07	7440-47-3	
Copper	0.75 ug/L		0.50	1	10/28/11 08:24	11/03/11 04:07	7440-50-8	
Iron	105 ug/L		50.0	1	10/28/11 08:24	11/03/11 04:07	7439-89-6	
Lead	0.21 ug/L		0.10	1	10/28/11 08:24	11/03/11 04:07	7439-92-1	
Magnesium	6240 ug/L		5.0	1	10/28/11 08:24	11/03/11 04:07	7439-95-4	
Manganese	97.3 ug/L		0.50	1	10/28/11 08:24	11/03/11 04:07	7439-96-5	
Nickel	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 04:07	7440-02-0	
Potassium	695 ug/L		20.0	1	10/28/11 08:24	11/03/11 04:07	7440-09-7	
Selenium	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 04:07	7782-49-2	
Silver	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 04:07	7440-22-4	
Sodium	2450 ug/L		50.0	1	10/28/11 08:24	11/03/11 04:07	7440-23-5	
Thallium	ND ug/L		0.10	1	10/28/11 08:24	11/03/11 04:07	7440-28-0	
Total Hardness by 2340B	118000 ug/L		355	5	10/28/11 08:24	11/03/11 04:12		
Vanadium	0.25 ug/L		0.10	1	10/28/11 08:24	11/03/11 04:07	7440-62-2	
Zinc	7.4 ug/L		5.0	1	10/28/11 08:24	11/03/11 04:07	7440-66-6	
200.8 MET ICPMS, Dissolved		Analytical Method: EPA 200.8						
Aluminum, Dissolved	8.8 ug/L		4.0	1	10/28/11 08:22	11/03/11 16:23	7429-90-5	
Antimony, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 16:23	7440-36-0	
Arsenic, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 16:23	7440-38-2	
Barium, Dissolved	55.9 ug/L		0.30	1	10/28/11 08:22	11/03/11 16:23	7440-39-3	
Beryllium, Dissolved	ND ug/L		0.20	1	10/28/11 08:22	11/03/11 16:23	7440-41-7	
Cadmium, Dissolved	ND ug/L		0.080	1	10/28/11 08:22	11/03/11 16:23	7440-43-9	
Calcium, Dissolved	43200 ug/L		100	5	10/28/11 08:22	11/04/11 12:36	7440-70-2	
Chromium, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 16:23	7440-47-3	
Copper, Dissolved	0.88 ug/L		0.50	1	10/28/11 08:22	11/03/11 16:23	7440-50-8	
Iron, Dissolved	ND ug/L		50.0	1	10/28/11 08:22	11/03/11 16:23	7439-89-6	
Lead, Dissolved	ND ug/L		0.10	1	10/28/11 08:22	11/03/11 16:23	7439-92-1	
Magnesium, Dissolved	6080 ug/L		5.0	1	10/28/11 08:22	11/03/11 16:23	7439-95-4	
Manganese, Dissolved	90.3 ug/L		0.50	1	10/28/11 08:22	11/03/11 16:23	7439-96-5	
Nickel, Dissolved	0.93 ug/L		0.50	1	10/28/11 08:22	11/03/11 16:23	7440-02-0	
Potassium, Dissolved	686 ug/L		100	5	10/28/11 08:22	11/04/11 12:36	7440-09-7	
Selenium, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 16:23	7782-49-2	
Silver, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 16:23	7440-22-4	
Sodium, Dissolved	2460 ug/L		50.0	1	10/28/11 08:22	11/03/11 16:23	7440-23-5	
Thallium, Dissolved	ND ug/L		0.10	1	10/28/11 08:22	11/03/11 16:23	7440-28-0	
Vanadium, Dissolved	ND ug/L		0.10	1	10/28/11 08:22	11/03/11 16:23	7440-62-2	
Zinc, Dissolved	5.3 ug/L		5.0	1	10/28/11 08:22	11/03/11 16:23	7440-66-6	

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ANALYTICAL RESULTS

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

Sample: DR-2 **Lab ID: 60108677002** Collected: 10/20/11 11:50 Received: 10/22/11 09:30 Matrix: Water

Comments: • The samples were received outside of required temperature range. Analysis was completed upon client approval.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
245.1 Mercury	Analytical Method: EPA 245.1							
Mercury	ND ug/L		0.20	1	10/27/11 13:03	10/28/11 14:16	7439-97-6	
245.1 Mercury, Dissolved	Analytical Method: EPA 245.1							
Mercury, Dissolved	ND ug/L		0.20	1	10/31/11 12:27	11/01/11 10:51	7439-97-6	
2510B Specific Conductance	Analytical Method: SM 2510B							
Specific Conductance	263 umhos/cm		10.0	1		10/27/11 10:24		
Salinity	Analytical Method: Calculated							
Salinity (as dissolved solids)	168 mg/L		6.0	1		10/27/11 16:20		
Salinity (as seawater)	0.13 PSU		0.010	1		10/27/11 16:20		
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity,Bicarbonate (CaCO3)	84.0 mg/L		20.0	1		11/01/11 10:00		
Alkalinity, Carbonate (CaCO3)	ND mg/L		20.0	1		11/01/11 10:00		
Alkalinity, Total as CaCO3	84.0 mg/L		20.0	1		11/01/11 10:00		
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	164 mg/L		5.0	1		10/26/11 15:00		
2540D Total Suspended Solids	Analytical Method: SM 2540D							
Total Suspended Solids	ND mg/L		5.0	1		10/27/11 14:44		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	52.8 mg/L		5.0	5		10/29/11 07:29	14808-79-8	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E							
Cyanide	ND mg/L		0.0050	1		10/28/11 15:03	57-12-5	

ANALYTICAL RESULTS

Project: RICO WATER SAMPLING
Pace Project No.: 60108677

Sample: DR-3 **Lab ID: 60108677003** Collected: 10/20/11 09:30 Received: 10/22/11 09:30 Matrix: Water

Comments: • The samples were received outside of required temperature range. Analysis was completed upon client approval.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS		Analytical Method: EPA 200.8						
Aluminum	215 ug/L		4.0	1	10/28/11 08:24	11/03/11 04:16	7429-90-5	
Antimony	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 04:16	7440-36-0	
Arsenic	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 04:16	7440-38-2	
Barium	19.1 ug/L		0.30	1	10/28/11 08:24	11/03/11 04:16	7440-39-3	
Beryllium	0.53 ug/L		0.20	1	10/28/11 08:24	11/03/11 04:16	7440-41-7	
Cadmium	18.1 ug/L		0.080	1	10/28/11 08:24	11/03/11 04:16	7440-43-9	
Calcium	235000 ug/L		400	20	10/28/11 08:24	11/04/11 10:48	7440-70-2	
Chromium	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 04:16	7440-47-3	
Copper	27.6 ug/L		0.50	1	10/28/11 08:24	11/03/11 04:16	7440-50-8	
Iron	4040 ug/L		50.0	1	10/28/11 08:24	11/03/11 04:16	7439-89-6	
Lead	1.3 ug/L		0.10	1	10/28/11 08:24	11/03/11 04:16	7439-92-1	
Magnesium	20000 ug/L		5.0	1	10/28/11 08:24	11/03/11 04:16	7439-95-4	
Manganese	3530 ug/L		5.0	10	10/28/11 08:24	11/03/11 13:51	7439-96-5	
Nickel	6.2 ug/L		0.50	1	10/28/11 08:24	11/03/11 04:16	7440-02-0	
Potassium	1620 ug/L		20.0	1	10/28/11 08:24	11/03/11 04:16	7440-09-7	
Selenium	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 04:16	7782-49-2	
Silver	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 04:16	7440-22-4	
Sodium	9480 ug/L		50.0	1	10/28/11 08:24	11/03/11 04:16	7440-23-5	
Thallium	ND ug/L		0.10	1	10/28/11 08:24	11/03/11 04:16	7440-28-0	
Total Hardness by 2340B	668000 ug/L		1420	20	10/28/11 08:24	11/04/11 10:48		
Vanadium	ND ug/L		0.10	1	10/28/11 08:24	11/03/11 04:16	7440-62-2	
Zinc	3850 ug/L		100	20	10/28/11 08:24	11/04/11 10:48	7440-66-6	
200.8 MET ICPMS, Dissolved		Analytical Method: EPA 200.8						
Aluminum, Dissolved	26.5 ug/L		4.0	1	10/28/11 08:22	11/03/11 16:32	7429-90-5	
Antimony, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 16:32	7440-36-0	
Arsenic, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 16:32	7440-38-2	
Barium, Dissolved	18.6 ug/L		0.30	1	10/28/11 08:22	11/03/11 16:32	7440-39-3	
Beryllium, Dissolved	0.40 ug/L		0.20	1	10/28/11 08:22	11/03/11 16:32	7440-41-7	
Cadmium, Dissolved	17.1 ug/L		0.080	1	10/28/11 08:22	11/03/11 16:32	7440-43-9	
Calcium, Dissolved	274000 ug/L		400	20	10/28/11 08:22	11/04/11 12:40	7440-70-2	
Chromium, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 16:32	7440-47-3	
Copper, Dissolved	2.6 ug/L		0.50	1	10/28/11 08:22	11/03/11 16:32	7440-50-8	
Iron, Dissolved	1050 ug/L		50.0	1	10/28/11 08:22	11/03/11 16:32	7439-89-6	
Lead, Dissolved	ND ug/L		0.10	1	10/28/11 08:22	11/03/11 16:32	7439-92-1	
Magnesium, Dissolved	19500 ug/L		5.0	1	10/28/11 08:22	11/03/11 16:32	7439-95-4	
Manganese, Dissolved	2380 ug/L		5.0	10	10/28/11 08:22	11/03/11 16:37	7439-96-5	
Nickel, Dissolved	6.0 ug/L		0.50	1	10/28/11 08:22	11/03/11 16:32	7440-02-0	
Potassium, Dissolved	1430 ug/L		200	10	10/28/11 08:22	11/03/11 16:37	7440-09-7	
Selenium, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 16:32	7782-49-2	
Silver, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 16:32	7440-22-4	
Sodium, Dissolved	9250 ug/L		50.0	1	10/28/11 08:22	11/03/11 16:32	7440-23-5	
Thallium, Dissolved	ND ug/L		0.10	1	10/28/11 08:22	11/03/11 16:32	7440-28-0	
Vanadium, Dissolved	ND ug/L		0.10	1	10/28/11 08:22	11/03/11 16:32	7440-62-2	
Zinc, Dissolved	3690 ug/L		50.0	10	10/28/11 08:22	11/03/11 16:37	7440-66-6	

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ANALYTICAL RESULTS

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

Sample: DR-3 **Lab ID: 60108677003** Collected: 10/20/11 09:30 Received: 10/22/11 09:30 Matrix: Water

Comments: • The samples were received outside of required temperature range. Analysis was completed upon client approval.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
245.1 Mercury	Analytical Method: EPA 245.1							
Mercury	ND	ug/L	0.20	1	10/27/11 13:03	10/28/11 14:18	7439-97-6	
245.1 Mercury, Dissolved	Analytical Method: EPA 245.1							
Mercury, Dissolved	ND	ug/L	0.20	1	10/31/11 12:27	11/01/11 10:53	7439-97-6	
2510B Specific Conductance	Analytical Method: SM 2510B							
Specific Conductance	1140	umhos/cm	10.0	1		10/27/11 10:24		
Salinity	Analytical Method: Calculated							
Salinity (as dissolved solids)	726	mg/L	6.0	1		10/27/11 16:20		
Salinity (as seawater)	0.56	PSU	0.010	1		10/27/11 16:20		
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity,Bicarbonate (CaCO3)	108	mg/L	20.0	1		11/01/11 10:00		
Alkalinity, Carbonate (CaCO3)	ND	mg/L	20.0	1		11/01/11 10:00		
Alkalinity, Total as CaCO3	108	mg/L	20.0	1		11/01/11 10:00		
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	917	mg/L	5.0	1		10/26/11 15:00		
2540D Total Suspended Solids	Analytical Method: SM 2540D							
Total Suspended Solids	6.0	mg/L	5.0	1		10/27/11 14:44		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	538	mg/L	50.0	50		10/29/11 07:45	14808-79-8	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E							
Cyanide	ND	mg/L	0.0050	1		10/28/11 15:04	57-12-5	

ANALYTICAL RESULTS

Project: RICO WATER SAMPLING
Pace Project No.: 60108677

Sample: DR-4 **Lab ID: 60108677004** Collected: 10/20/11 10:40 Received: 10/22/11 09:30 Matrix: Water

Comments: • The samples were received outside of required temperature range. Analysis was completed upon client approval.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS		Analytical Method: EPA 200.8						
Aluminum	150 ug/L		4.0	1	10/28/11 08:24	11/03/11 04:26	7429-90-5	
Antimony	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 04:26	7440-36-0	
Arsenic	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 04:26	7440-38-2	
Barium	18.6 ug/L		0.30	1	10/28/11 08:24	11/03/11 04:26	7440-39-3	
Beryllium	0.33 ug/L		0.20	1	10/28/11 08:24	11/03/11 04:26	7440-41-7	
Cadmium	16.6 ug/L		0.080	1	10/28/11 08:24	11/03/11 04:26	7440-43-9	
Calcium	224000 ug/L		400	20	10/28/11 08:24	11/04/11 10:52	7440-70-2	
Chromium	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 04:26	7440-47-3	
Copper	19.1 ug/L		0.50	1	10/28/11 08:24	11/03/11 04:26	7440-50-8	
Iron	2730 ug/L		50.0	1	10/28/11 08:24	11/03/11 04:26	7439-89-6	
Lead	1.1 ug/L		0.10	1	10/28/11 08:24	11/03/11 04:26	7439-92-1	
Magnesium	19300 ug/L		5.0	1	10/28/11 08:24	11/03/11 04:26	7439-95-4	
Manganese	2970 ug/L		5.0	10	10/28/11 08:24	11/03/11 15:28	7439-96-5	
Nickel	5.9 ug/L		0.50	1	10/28/11 08:24	11/03/11 04:26	7440-02-0	
Potassium	1550 ug/L		20.0	1	10/28/11 08:24	11/03/11 04:26	7440-09-7	
Selenium	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 04:26	7782-49-2	
Silver	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 04:26	7440-22-4	
Sodium	9130 ug/L		50.0	1	10/28/11 08:24	11/03/11 04:26	7440-23-5	
Thallium	ND ug/L		0.10	1	10/28/11 08:24	11/03/11 04:26	7440-28-0	
Total Hardness by 2340B	639000 ug/L		1420	20	10/28/11 08:24	11/04/11 10:52		
Vanadium	ND ug/L		0.10	1	10/28/11 08:24	11/03/11 04:26	7440-62-2	
Zinc	3520 ug/L		100	20	10/28/11 08:24	11/04/11 10:52	7440-66-6	
200.8 MET ICPMS, Dissolved		Analytical Method: EPA 200.8						
Aluminum, Dissolved	4.2 ug/L		4.0	1	10/28/11 08:22	11/03/11 16:51	7429-90-5	
Antimony, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 16:51	7440-36-0	
Arsenic, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 16:51	7440-38-2	
Barium, Dissolved	19.0 ug/L		0.30	1	10/28/11 08:22	11/03/11 16:51	7440-39-3	
Beryllium, Dissolved	ND ug/L		0.20	1	10/28/11 08:22	11/03/11 16:51	7440-41-7	
Cadmium, Dissolved	15.4 ug/L		0.080	1	10/28/11 08:22	11/03/11 16:51	7440-43-9	
Calcium, Dissolved	230000 ug/L		400	20	10/28/11 08:22	11/04/11 12:44	7440-70-2	
Chromium, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 16:51	7440-47-3	
Copper, Dissolved	1.1 ug/L		0.50	1	10/28/11 08:22	11/03/11 16:51	7440-50-8	
Iron, Dissolved	ND ug/L		50.0	1	10/28/11 08:22	11/03/11 16:51	7439-89-6	
Lead, Dissolved	ND ug/L		0.10	1	10/28/11 08:22	11/03/11 16:51	7439-92-1	
Magnesium, Dissolved	19900 ug/L		5.0	1	10/28/11 08:22	11/03/11 16:51	7439-95-4	
Manganese, Dissolved	2410 ug/L		5.0	10	10/28/11 08:22	11/03/11 16:55	7439-96-5	
Nickel, Dissolved	6.3 ug/L		0.50	1	10/28/11 08:22	11/03/11 16:51	7440-02-0	
Potassium, Dissolved	1620 ug/L		400	20	10/28/11 08:22	11/04/11 12:44	7440-09-7	
Selenium, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 16:51	7782-49-2	
Silver, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 16:51	7440-22-4	
Sodium, Dissolved	9430 ug/L		50.0	1	10/28/11 08:22	11/03/11 16:51	7440-23-5	
Thallium, Dissolved	ND ug/L		0.10	1	10/28/11 08:22	11/03/11 16:51	7440-28-0	
Vanadium, Dissolved	ND ug/L		0.10	1	10/28/11 08:22	11/03/11 16:51	7440-62-2	
Zinc, Dissolved	3230 ug/L		50.0	10	10/28/11 08:22	11/03/11 16:55	7440-66-6	

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ANALYTICAL RESULTS

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

Sample: DR-4 **Lab ID: 60108677004** Collected: 10/20/11 10:40 Received: 10/22/11 09:30 Matrix: Water

Comments: • The samples were received outside of required temperature range. Analysis was completed upon client approval.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
245.1 Mercury	Analytical Method: EPA 245.1							
Mercury	ND	ug/L	0.20	1	10/27/11 13:03	10/28/11 14:25	7439-97-6	
245.1 Mercury, Dissolved	Analytical Method: EPA 245.1							
Mercury, Dissolved	ND	ug/L	0.20	1	10/31/11 12:27	11/01/11 10:59	7439-97-6	
2510B Specific Conductance	Analytical Method: SM 2510B							
Specific Conductance	1100	umhos/cm	10.0	1		10/27/11 10:24		
Salinity	Analytical Method: Calculated							
Salinity (as dissolved solids)	706	mg/L	6.0	1		10/27/11 16:20		
Salinity (as seawater)	0.55	PSU	0.010	1		10/27/11 16:20		
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity,Bicarbonate (CaCO3)	100	mg/L	20.0	1		11/01/11 10:00		
Alkalinity, Carbonate (CaCO3)	ND	mg/L	20.0	1		11/01/11 10:00		
Alkalinity, Total as CaCO3	100	mg/L	20.0	1		11/01/11 10:00		
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	927	mg/L	5.0	1		10/26/11 15:01		
2540D Total Suspended Solids	Analytical Method: SM 2540D							
Total Suspended Solids	ND	mg/L	5.0	1		10/27/11 14:44		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	594	mg/L	50.0	50		10/29/11 08:02	14808-79-8	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E							
Cyanide	ND	mg/L	0.0050	1		10/28/11 15:07	57-12-5	

ANALYTICAL RESULTS

Project: RICO WATER SAMPLING
Pace Project No.: 60108677

Sample: DR-5 **Lab ID: 60108677005** Collected: 10/20/11 11:45 Received: 10/22/11 09:30 Matrix: Water

Comments: • The samples were received outside of required temperature range. Analysis was completed upon client approval.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS		Analytical Method: EPA 200.8						
Aluminum	88.2 ug/L		4.0	1	10/28/11 08:24	11/03/11 06:03	7429-90-5	
Antimony	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 06:03	7440-36-0	
Arsenic	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 06:03	7440-38-2	
Barium	18.9 ug/L		0.30	1	10/28/11 08:24	11/03/11 06:03	7440-39-3	
Beryllium	0.21 ug/L		0.20	1	10/28/11 08:24	11/03/11 06:03	7440-41-7	
Cadmium	15.1 ug/L		0.080	1	10/28/11 08:24	11/03/11 06:03	7440-43-9	
Calcium	271000 ug/L		400	20	10/28/11 08:24	11/04/11 10:56	7440-70-2	
Chromium	0.79 ug/L		0.50	1	10/28/11 08:24	11/03/11 06:03	7440-47-3	
Copper	10.7 ug/L		0.50	1	10/28/11 08:24	11/03/11 06:03	7440-50-8	
Iron	1340 ug/L		50.0	1	10/28/11 08:24	11/03/11 06:03	7439-89-6	
Lead	0.87 ug/L		0.10	1	10/28/11 08:24	11/03/11 06:03	7439-92-1	
Magnesium	20200 ug/L		5.0	1	10/28/11 08:24	11/03/11 06:03	7439-95-4	
Manganese	2240 ug/L		2.5	5	10/28/11 08:24	11/03/11 06:07	7439-96-5	
Nickel	5.8 ug/L		0.50	1	10/28/11 08:24	11/03/11 06:03	7440-02-0	
Potassium	1720 ug/L		20.0	1	10/28/11 08:24	11/03/11 06:03	7440-09-7	
Selenium	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 06:03	7782-49-2	
Silver	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 06:03	7440-22-4	
Sodium	9580 ug/L		50.0	1	10/28/11 08:24	11/03/11 06:03	7440-23-5	
Thallium	ND ug/L		0.10	1	10/28/11 08:24	11/03/11 06:03	7440-28-0	
Total Hardness by 2340B	761000 ug/L		1420	20	10/28/11 08:24	11/04/11 10:56		
Vanadium	ND ug/L		0.10	1	10/28/11 08:24	11/03/11 06:03	7440-62-2	
Zinc	4020 ug/L		50.0	10	10/28/11 08:24	11/03/11 15:32	7440-66-6	
200.8 MET ICPMS, Dissolved		Analytical Method: EPA 200.8						
Aluminum, Dissolved	ND ug/L		4.0	1	10/28/11 08:22	11/03/11 17:00	7429-90-5	
Antimony, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 17:00	7440-36-0	
Arsenic, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 17:00	7440-38-2	
Barium, Dissolved	18.7 ug/L		0.30	1	10/28/11 08:22	11/03/11 17:00	7440-39-3	
Beryllium, Dissolved	ND ug/L		0.20	1	10/28/11 08:22	11/03/11 17:00	7440-41-7	
Cadmium, Dissolved	13.8 ug/L		0.080	1	10/28/11 08:22	11/03/11 17:00	7440-43-9	
Calcium, Dissolved	267000 ug/L		400	20	10/28/11 08:22	11/04/11 12:48	7440-70-2	
Chromium, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 17:00	7440-47-3	
Copper, Dissolved	1.0 ug/L		0.50	1	10/28/11 08:22	11/03/11 17:00	7440-50-8	
Iron, Dissolved	ND ug/L		50.0	1	10/28/11 08:22	11/03/11 17:00	7439-89-6	
Lead, Dissolved	ND ug/L		0.10	1	10/28/11 08:22	11/03/11 17:00	7439-92-1	
Magnesium, Dissolved	20100 ug/L		5.0	1	10/28/11 08:22	11/03/11 17:00	7439-95-4	
Manganese, Dissolved	2650 ug/L		5.0	10	10/28/11 08:22	11/03/11 17:05	7439-96-5	
Nickel, Dissolved	5.7 ug/L		0.50	1	10/28/11 08:22	11/03/11 17:00	7440-02-0	
Potassium, Dissolved	1910 ug/L		400	20	10/28/11 08:22	11/04/11 12:48	7440-09-7	
Selenium, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 17:00	7782-49-2	
Silver, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 17:00	7440-22-4	
Sodium, Dissolved	9460 ug/L		50.0	1	10/28/11 08:22	11/03/11 17:00	7440-23-5	
Thallium, Dissolved	ND ug/L		0.10	1	10/28/11 08:22	11/03/11 17:00	7440-28-0	
Vanadium, Dissolved	ND ug/L		0.10	1	10/28/11 08:22	11/03/11 17:00	7440-62-2	
Zinc, Dissolved	3280 ug/L		50.0	10	10/28/11 08:22	11/03/11 17:05	7440-66-6	

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ANALYTICAL RESULTS

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

Sample: DR-5 **Lab ID: 60108677005** Collected: 10/20/11 11:45 Received: 10/22/11 09:30 Matrix: Water

Comments: • The samples were received outside of required temperature range. Analysis was completed upon client approval.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
245.1 Mercury	Analytical Method: EPA 245.1							
Mercury	ND ug/L		0.20	1	10/27/11 13:03	10/28/11 14:27	7439-97-6	
245.1 Mercury, Dissolved	Analytical Method: EPA 245.1							
Mercury, Dissolved	ND ug/L		0.20	1	10/31/11 12:27	11/01/11 11:01	7439-97-6	
2510B Specific Conductance	Analytical Method: SM 2510B							
Specific Conductance	1090 umhos/cm		10.0	1		10/27/11 10:24		
Salinity	Analytical Method: Calculated							
Salinity (as dissolved solids)	700 mg/L		6.0	1		10/27/11 16:20		
Salinity (as seawater)	0.54 PSU		0.010	1		10/27/11 16:20		
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity,Bicarbonate (CaCO3)	98.0 mg/L		20.0	1		11/01/11 10:00		
Alkalinity, Carbonate (CaCO3)	ND mg/L		20.0	1		11/01/11 10:00		
Alkalinity, Total as CaCO3	98.0 mg/L		20.0	1		11/01/11 10:00		
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	934 mg/L		5.0	1		10/26/11 15:01		
2540D Total Suspended Solids	Analytical Method: SM 2540D							
Total Suspended Solids	ND mg/L		5.0	1		10/27/11 14:45		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	612 mg/L		50.0	50		10/29/11 08:18	14808-79-8	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E							
Cyanide	ND mg/L		0.0050	1		10/28/11 15:07	57-12-5	

ANALYTICAL RESULTS

Project: RICO WATER SAMPLING
Pace Project No.: 60108677

Sample: DR-6 **Lab ID: 60108677006** Collected: 10/20/11 12:25 Received: 10/22/11 09:30 Matrix: Water

Comments: • The samples were received outside of required temperature range. Analysis was completed upon client approval.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS		Analytical Method: EPA 200.8						
Aluminum	44.0 ug/L		4.0	1	10/28/11 08:24	11/03/11 06:12	7429-90-5	
Antimony	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 06:12	7440-36-0	
Arsenic	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 06:12	7440-38-2	
Barium	18.2 ug/L		0.30	1	10/28/11 08:24	11/03/11 06:12	7440-39-3	
Beryllium	ND ug/L		0.20	1	10/28/11 08:24	11/03/11 06:12	7440-41-7	
Cadmium	12.8 ug/L		0.080	1	10/28/11 08:24	11/03/11 06:12	7440-43-9	
Calcium	246000 ug/L		400	20	10/28/11 08:24	11/04/11 11:00	7440-70-2	
Chromium	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 06:12	7440-47-3	
Copper	4.7 ug/L		0.50	1	10/28/11 08:24	11/03/11 06:12	7440-50-8	
Iron	586 ug/L		50.0	1	10/28/11 08:24	11/03/11 06:12	7439-89-6	
Lead	0.34 ug/L		0.10	1	10/28/11 08:24	11/03/11 06:12	7439-92-1	
Magnesium	21900 ug/L		5.0	1	10/28/11 08:24	11/03/11 06:12	7439-95-4	
Manganese	2610 ug/L		5.0	10	10/28/11 08:24	11/03/11 15:37	7439-96-5	
Nickel	5.3 ug/L		0.50	1	10/28/11 08:24	11/03/11 06:12	7440-02-0	
Potassium	2210 ug/L		20.0	1	10/28/11 08:24	11/03/11 06:12	7440-09-7	
Selenium	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 06:12	7782-49-2	
Silver	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 06:12	7440-22-4	
Sodium	11100 ug/L		50.0	1	10/28/11 08:24	11/03/11 06:12	7440-23-5	
Thallium	ND ug/L		0.10	1	10/28/11 08:24	11/03/11 06:12	7440-28-0	
Total Hardness by 2340B	705000 ug/L		1420	20	10/28/11 08:24	11/04/11 11:00		
Vanadium	ND ug/L		0.10	1	10/28/11 08:24	11/03/11 06:12	7440-62-2	
Zinc	3650 ug/L		50.0	10	10/28/11 08:24	11/03/11 15:37	7440-66-6	
200.8 MET ICPMS, Dissolved		Analytical Method: EPA 200.8						
Aluminum, Dissolved	ND ug/L		4.0	1	10/28/11 08:22	11/03/11 17:09	7429-90-5	
Antimony, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 17:09	7440-36-0	
Arsenic, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 17:09	7440-38-2	
Barium, Dissolved	18.5 ug/L		0.30	1	10/28/11 08:22	11/03/11 17:09	7440-39-3	
Beryllium, Dissolved	ND ug/L		0.20	1	10/28/11 08:22	11/03/11 17:09	7440-41-7	
Cadmium, Dissolved	12.7 ug/L		0.080	1	10/28/11 08:22	11/03/11 17:09	7440-43-9	
Calcium, Dissolved	243000 ug/L		400	20	10/28/11 08:22	11/04/11 12:51	7440-70-2	
Chromium, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 17:09	7440-47-3	
Copper, Dissolved	0.93 ug/L		0.50	1	10/28/11 08:22	11/03/11 17:09	7440-50-8	
Iron, Dissolved	ND ug/L		50.0	1	10/28/11 08:22	11/03/11 17:09	7439-89-6	
Lead, Dissolved	ND ug/L		0.10	1	10/28/11 08:22	11/03/11 17:09	7439-92-1	
Magnesium, Dissolved	21700 ug/L		5.0	1	10/28/11 08:22	11/03/11 17:09	7439-95-4	
Manganese, Dissolved	2520 ug/L		5.0	10	10/28/11 08:22	11/03/11 17:14	7439-96-5	
Nickel, Dissolved	5.4 ug/L		0.50	1	10/28/11 08:22	11/03/11 17:09	7440-02-0	
Potassium, Dissolved	2230 ug/L		400	20	10/28/11 08:22	11/04/11 12:51	7440-09-7	
Selenium, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 17:09	7782-49-2	
Silver, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 17:09	7440-22-4	
Sodium, Dissolved	11000 ug/L		50.0	1	10/28/11 08:22	11/03/11 17:09	7440-23-5	
Thallium, Dissolved	ND ug/L		0.10	1	10/28/11 08:22	11/03/11 17:09	7440-28-0	
Vanadium, Dissolved	ND ug/L		0.10	1	10/28/11 08:22	11/03/11 17:09	7440-62-2	
Zinc, Dissolved	3440 ug/L		50.0	10	10/28/11 08:22	11/03/11 17:14	7440-66-6	

ANALYTICAL RESULTS

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

Sample: DR-6 **Lab ID: 60108677006** Collected: 10/20/11 12:25 Received: 10/22/11 09:30 Matrix: Water

Comments: • The samples were received outside of required temperature range. Analysis was completed upon client approval.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
245.1 Mercury	Analytical Method: EPA 245.1							
Mercury	ND ug/L		0.20	1	10/27/11 13:03	10/28/11 14:29	7439-97-6	
245.1 Mercury, Dissolved	Analytical Method: EPA 245.1							
Mercury, Dissolved	ND ug/L		0.20	1	10/31/11 12:27	11/01/11 11:03	7439-97-6	
2510B Specific Conductance	Analytical Method: SM 2510B							
Specific Conductance	1190 umhos/cm		10.0	1		10/27/11 10:24		
Salinity	Analytical Method: Calculated							
Salinity (as dissolved solids)	764 mg/L		6.0	1		10/27/11 16:20		
Salinity (as seawater)	0.59 PSU		0.010	1		10/27/11 16:20		
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity,Bicarbonate (CaCO3)	128 mg/L		20.0	1		11/01/11 10:00		
Alkalinity, Carbonate (CaCO3)	ND mg/L		20.0	1		11/01/11 10:00		
Alkalinity, Total as CaCO3	128 mg/L		20.0	1		11/01/11 10:00		
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	975 mg/L		5.0	1		10/26/11 15:01		
2540D Total Suspended Solids	Analytical Method: SM 2540D							
Total Suspended Solids	ND mg/L		5.0	1		10/27/11 14:45		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	615 mg/L		50.0	50		10/29/11 08:35	14808-79-8	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E							
Cyanide	ND mg/L		0.0050	1		10/28/11 15:08	57-12-5	

ANALYTICAL RESULTS

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

Sample: DR-7 **Lab ID: 60108677007** Collected: 10/20/11 12:45 Received: 10/22/11 09:30 Matrix: Water

Comments: • The samples were received outside of required temperature range. Analysis was completed upon client approval.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS		Analytical Method: EPA 200.8						
Aluminum	57.8 ug/L		4.0	1	10/28/11 08:24	11/03/11 06:21	7429-90-5	
Antimony	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 06:21	7440-36-0	
Arsenic	0.61 ug/L		0.50	1	10/28/11 08:24	11/03/11 06:21	7440-38-2	
Barium	53.3 ug/L		0.30	1	10/28/11 08:24	11/03/11 06:21	7440-39-3	
Beryllium	ND ug/L		0.20	1	10/28/11 08:24	11/03/11 06:21	7440-41-7	
Cadmium	1.2 ug/L		0.080	1	10/28/11 08:24	11/03/11 06:21	7440-43-9	
Calcium	57800 ug/L		100	5	10/28/11 08:24	11/03/11 06:26	7440-70-2	
Chromium	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 06:21	7440-47-3	
Copper	0.89 ug/L		0.50	1	10/28/11 08:24	11/03/11 06:21	7440-50-8	
Iron	194 ug/L		50.0	1	10/28/11 08:24	11/03/11 06:21	7439-89-6	
Lead	0.36 ug/L		0.10	1	10/28/11 08:24	11/03/11 06:21	7439-92-1	
Magnesium	9260 ug/L		5.0	1	10/28/11 08:24	11/03/11 06:21	7439-95-4	
Manganese	280 ug/L		0.50	1	10/28/11 08:24	11/03/11 06:21	7439-96-5	
Nickel	0.77 ug/L		0.50	1	10/28/11 08:24	11/03/11 06:21	7440-02-0	
Potassium	1380 ug/L		20.0	1	10/28/11 08:24	11/03/11 06:21	7440-09-7	
Selenium	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 06:21	7782-49-2	
Silver	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 06:21	7440-22-4	
Sodium	4520 ug/L		50.0	1	10/28/11 08:24	11/03/11 06:21	7440-23-5	
Thallium	ND ug/L		0.10	1	10/28/11 08:24	11/03/11 06:21	7440-28-0	
Total Hardness by 2340B	182000 ug/L		355	5	10/28/11 08:24	11/03/11 06:26		
Vanadium	0.17 ug/L		0.10	1	10/28/11 08:24	11/03/11 06:21	7440-62-2	
Zinc	240 ug/L		5.0	1	10/28/11 08:24	11/03/11 06:21	7440-66-6	
200.8 MET ICPMS, Dissolved		Analytical Method: EPA 200.8						
Aluminum, Dissolved	10.1 ug/L		4.0	1	10/28/11 08:22	11/03/11 17:19	7429-90-5	
Antimony, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 17:19	7440-36-0	
Arsenic, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 17:19	7440-38-2	
Barium, Dissolved	53.6 ug/L		0.30	1	10/28/11 08:22	11/03/11 17:19	7440-39-3	
Beryllium, Dissolved	ND ug/L		0.20	1	10/28/11 08:22	11/03/11 17:19	7440-41-7	
Cadmium, Dissolved	1.1 ug/L		0.080	1	10/28/11 08:22	11/03/11 17:19	7440-43-9	
Calcium, Dissolved	68400 ug/L		200	10	10/28/11 08:22	11/04/11 13:04	7440-70-2	
Chromium, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 17:19	7440-47-3	
Copper, Dissolved	0.74 ug/L		0.50	1	10/28/11 08:22	11/03/11 17:19	7440-50-8	
Iron, Dissolved	82.3 ug/L		50.0	1	10/28/11 08:22	11/03/11 17:19	7439-89-6	
Lead, Dissolved	ND ug/L		0.10	1	10/28/11 08:22	11/03/11 17:19	7439-92-1	
Magnesium, Dissolved	9190 ug/L		5.0	1	10/28/11 08:22	11/03/11 17:19	7439-95-4	
Manganese, Dissolved	270 ug/L		0.50	1	10/28/11 08:22	11/03/11 17:19	7439-96-5	
Nickel, Dissolved	1.4 ug/L		0.50	1	10/28/11 08:22	11/03/11 17:19	7440-02-0	
Potassium, Dissolved	1400 ug/L		200	10	10/28/11 08:22	11/04/11 13:04	7440-09-7	
Selenium, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 17:19	7782-49-2	
Silver, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 17:19	7440-22-4	
Sodium, Dissolved	4560 ug/L		50.0	1	10/28/11 08:22	11/03/11 17:19	7440-23-5	
Thallium, Dissolved	ND ug/L		0.10	1	10/28/11 08:22	11/03/11 17:19	7440-28-0	
Vanadium, Dissolved	ND ug/L		0.10	1	10/28/11 08:22	11/03/11 17:19	7440-62-2	
Zinc, Dissolved	222 ug/L		5.0	1	10/28/11 08:22	11/03/11 17:19	7440-66-6	

Date: 11/15/2011 05:22 PM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

Sample: DR-7 **Lab ID: 60108677007** Collected: 10/20/11 12:45 Received: 10/22/11 09:30 Matrix: Water

Comments: • The samples were received outside of required temperature range. Analysis was completed upon client approval.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
245.1 Mercury	Analytical Method: EPA 245.1							
Mercury	ND	ug/L	0.20	1	10/27/11 13:03	10/28/11 14:31	7439-97-6	
245.1 Mercury, Dissolved	Analytical Method: EPA 245.1							
Mercury, Dissolved	ND	ug/L	0.20	1	10/31/11 12:27	11/01/11 11:05	7439-97-6	
2510B Specific Conductance	Analytical Method: SM 2510B							
Specific Conductance	424	umhos/cm	10.0	1		10/27/11 10:24		
Salinity	Analytical Method: Calculated							
Salinity (as dissolved solids)	271	mg/L	6.0	1		10/27/11 16:20		
Salinity (as seawater)	0.20	PSU	0.010	1		10/27/11 16:20		
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity,Bicarbonate (CaCO ₃)	108	mg/L	20.0	1		11/01/11 10:00		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	20.0	1		11/01/11 10:00		
Alkalinity, Total as CaCO ₃	108	mg/L	20.0	1		11/01/11 10:00		
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	267	mg/L	5.0	1		10/26/11 15:01		
2540D Total Suspended Solids	Analytical Method: SM 2540D							
Total Suspended Solids	ND	mg/L	5.0	1		10/27/11 14:45		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	115	mg/L	10.0	10		10/31/11 14:24	14808-79-8	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E							
Cyanide	ND	mg/L	0.0050	1		10/28/11 15:08	57-12-5	

ANALYTICAL RESULTS

Project: RICO WATER SAMPLING
Pace Project No.: 60108677

Sample: DR-8 **Lab ID: 60108677008** Collected: 10/20/11 09:40 Received: 10/22/11 09:30 Matrix: Water

Comments: • The samples were received outside of required temperature range. Analysis was completed upon client approval.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS		Analytical Method: EPA 200.8						
Aluminum	197 ug/L		4.0	1	10/28/11 08:24	11/03/11 06:54	7429-90-5	
Antimony	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 06:54	7440-36-0	
Arsenic	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 06:54	7440-38-2	
Barium	19.2 ug/L		0.30	1	10/28/11 08:24	11/03/11 06:54	7440-39-3	
Beryllium	0.62 ug/L		0.20	1	10/28/11 08:24	11/03/11 06:54	7440-41-7	
Cadmium	17.9 ug/L		0.080	1	10/28/11 08:24	11/03/11 06:54	7440-43-9	
Calcium	236000 ug/L		400	20	10/28/11 08:24	11/04/11 11:04	7440-70-2	
Chromium	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 06:54	7440-47-3	
Copper	25.9 ug/L		0.50	1	10/28/11 08:24	11/03/11 06:54	7440-50-8	
Iron	3910 ug/L		50.0	1	10/28/11 08:24	11/03/11 06:54	7439-89-6	
Lead	1.2 ug/L		0.10	1	10/28/11 08:24	11/03/11 06:54	7439-92-1	
Magnesium	19800 ug/L		5.0	1	10/28/11 08:24	11/03/11 06:54	7439-95-4	
Manganese	3400 ug/L		5.0	10	10/28/11 08:24	11/03/11 15:41	7439-96-5	
Nickel	6.0 ug/L		0.50	1	10/28/11 08:24	11/03/11 06:54	7440-02-0	
Potassium	1590 ug/L		20.0	1	10/28/11 08:24	11/03/11 06:54	7440-09-7	
Selenium	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 06:54	7782-49-2	
Silver	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 06:54	7440-22-4	
Sodium	9380 ug/L		50.0	1	10/28/11 08:24	11/03/11 06:54	7440-23-5	
Thallium	ND ug/L		0.10	1	10/28/11 08:24	11/03/11 06:54	7440-28-0	
Total Hardness by 2340B	670000 ug/L		1420	20	10/28/11 08:24	11/04/11 11:04		
Vanadium	ND ug/L		0.10	1	10/28/11 08:24	11/03/11 06:54	7440-62-2	
Zinc	3880 ug/L		100	20	10/28/11 08:24	11/04/11 11:04	7440-66-6	
200.8 MET ICPMS, Dissolved		Analytical Method: EPA 200.8						
Aluminum, Dissolved	26.9 ug/L		4.0	1	10/28/11 08:22	11/03/11 17:28	7429-90-5	
Antimony, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 17:28	7440-36-0	
Arsenic, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 17:28	7440-38-2	
Barium, Dissolved	18.5 ug/L		0.30	1	10/28/11 08:22	11/03/11 17:28	7440-39-3	
Beryllium, Dissolved	0.33 ug/L		0.20	1	10/28/11 08:22	11/03/11 17:28	7440-41-7	
Cadmium, Dissolved	17.0 ug/L		0.080	1	10/28/11 08:22	11/03/11 17:28	7440-43-9	
Calcium, Dissolved	228000 ug/L		400	20	10/28/11 08:22	11/04/11 13:08	7440-70-2	
Chromium, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 17:28	7440-47-3	
Copper, Dissolved	2.4 ug/L		0.50	1	10/28/11 08:22	11/03/11 17:28	7440-50-8	
Iron, Dissolved	1060 ug/L		50.0	1	10/28/11 08:22	11/03/11 17:28	7439-89-6	
Lead, Dissolved	ND ug/L		0.10	1	10/28/11 08:22	11/03/11 17:28	7439-92-1	
Magnesium, Dissolved	19200 ug/L		5.0	1	10/28/11 08:22	11/03/11 17:28	7439-95-4	
Manganese, Dissolved	3110 ug/L		5.0	10	10/28/11 08:22	11/03/11 17:32	7439-96-5	
Nickel, Dissolved	6.0 ug/L		0.50	1	10/28/11 08:22	11/03/11 17:28	7440-02-0	
Potassium, Dissolved	1600 ug/L		400	20	10/28/11 08:22	11/04/11 13:08	7440-09-7	
Selenium, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 17:28	7782-49-2	
Silver, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 17:28	7440-22-4	
Sodium, Dissolved	9060 ug/L		50.0	1	10/28/11 08:22	11/03/11 17:28	7440-23-5	
Thallium, Dissolved	ND ug/L		0.10	1	10/28/11 08:22	11/03/11 17:28	7440-28-0	
Vanadium, Dissolved	ND ug/L		0.10	1	10/28/11 08:22	11/03/11 17:28	7440-62-2	
Zinc, Dissolved	3700 ug/L		100	20	10/28/11 08:22	11/04/11 13:08	7440-66-6	

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ANALYTICAL RESULTS

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

Sample: DR-8 **Lab ID: 60108677008** Collected: 10/20/11 09:40 Received: 10/22/11 09:30 Matrix: Water

Comments: • The samples were received outside of required temperature range. Analysis was completed upon client approval.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
245.1 Mercury	Analytical Method: EPA 245.1							
Mercury	ND	ug/L	0.20	1	10/27/11 13:03	10/28/11 14:33	7439-97-6	
245.1 Mercury, Dissolved	Analytical Method: EPA 245.1							
Mercury, Dissolved	ND	ug/L	0.20	1	10/31/11 12:27	11/01/11 11:08	7439-97-6	
2510B Specific Conductance	Analytical Method: SM 2510B							
Specific Conductance	1090	umhos/cm	10.0	1		10/27/11 10:24		
Salinity	Analytical Method: Calculated							
Salinity (as dissolved solids)	696	mg/L	6.0	1		10/27/11 16:20		
Salinity (as seawater)	0.54	PSU	0.010	1		10/27/11 16:20		
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity,Bicarbonate (CaCO3)	104	mg/L	20.0	1		11/01/11 10:00		
Alkalinity, Carbonate (CaCO3)	ND	mg/L	20.0	1		11/01/11 10:00		
Alkalinity, Total as CaCO3	104	mg/L	20.0	1		11/01/11 10:00		
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	923	mg/L	5.0	1		10/26/11 15:02		
2540D Total Suspended Solids	Analytical Method: SM 2540D							
Total Suspended Solids	7.0	mg/L	5.0	1		10/27/11 14:45		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	604	mg/L	50.0	50		10/31/11 16:36	14808-79-8	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E							
Cyanide	ND	mg/L	0.0050	1		10/28/11 15:11	57-12-5	

ANALYTICAL RESULTS

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

Sample: DR-4-SW **Lab ID: 60108677009** Collected: 10/21/11 11:00 Received: 10/22/11 09:30 Matrix: Water

Comments: • The samples were received outside of required temperature range. Analysis was completed upon client approval.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS		Analytical Method: EPA 200.8						
Aluminum	59.4 ug/L		4.0	1	10/28/11 08:24	11/03/11 07:03	7429-90-5	
Antimony	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 07:03	7440-36-0	
Arsenic	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 07:03	7440-38-2	
Barium	58.7 ug/L		0.30	1	10/28/11 08:24	11/03/11 07:03	7440-39-3	
Beryllium	ND ug/L		0.20	1	10/28/11 08:24	11/03/11 07:03	7440-41-7	
Cadmium	0.79 ug/L		0.080	1	10/28/11 08:24	11/03/11 07:03	7440-43-9	
Calcium	53100 ug/L		100	5	10/28/11 08:24	11/03/11 07:08	7440-70-2	
Chromium	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 07:03	7440-47-3	
Copper	0.95 ug/L		0.50	1	10/28/11 08:24	11/03/11 07:03	7440-50-8	
Iron	152 ug/L		50.0	1	10/28/11 08:24	11/03/11 07:03	7439-89-6	
Lead	0.36 ug/L		0.10	1	10/28/11 08:24	11/03/11 07:03	7439-92-1	
Magnesium	8490 ug/L		5.0	1	10/28/11 08:24	11/03/11 07:03	7439-95-4	
Manganese	218 ug/L		0.50	1	10/28/11 08:24	11/03/11 07:03	7439-96-5	
Nickel	0.71 ug/L		0.50	1	10/28/11 08:24	11/03/11 07:03	7440-02-0	
Potassium	1020 ug/L		20.0	1	10/28/11 08:24	11/03/11 07:03	7440-09-7	
Selenium	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 07:03	7782-49-2	
Silver	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 07:03	7440-22-4	
Sodium	3520 ug/L		50.0	1	10/28/11 08:24	11/03/11 07:03	7440-23-5	
Thallium	ND ug/L		0.10	1	10/28/11 08:24	11/03/11 07:03	7440-28-0	
Total Hardness by 2340B	168000 ug/L		355	5	10/28/11 08:24	11/03/11 07:08		
Vanadium	0.19 ug/L		0.10	1	10/28/11 08:24	11/03/11 07:03	7440-62-2	
Zinc	177 ug/L		5.0	1	10/28/11 08:24	11/03/11 07:03	7440-66-6	
200.8 MET ICPMS, Dissolved		Analytical Method: EPA 200.8						
Aluminum, Dissolved	11.6 ug/L		4.0	1	10/28/11 08:22	11/03/11 17:46	7429-90-5	
Antimony, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 17:46	7440-36-0	
Arsenic, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/04/11 13:12	7440-38-2	
Barium, Dissolved	58.4 ug/L		0.30	1	10/28/11 08:22	11/03/11 17:46	7440-39-3	
Beryllium, Dissolved	ND ug/L		0.20	1	10/28/11 08:22	11/03/11 17:46	7440-41-7	
Cadmium, Dissolved	0.73 ug/L		0.080	1	10/28/11 08:22	11/03/11 17:46	7440-43-9	
Calcium, Dissolved	64200 ug/L		200	10	10/28/11 08:22	11/04/11 13:16	7440-70-2	
Chromium, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 17:46	7440-47-3	
Copper, Dissolved	0.88 ug/L		0.50	1	10/28/11 08:22	11/03/11 17:46	7440-50-8	
Iron, Dissolved	52.2 ug/L		50.0	1	10/28/11 08:22	11/03/11 17:46	7439-89-6	
Lead, Dissolved	0.11 ug/L		0.10	1	10/28/11 08:22	11/03/11 17:46	7439-92-1	
Magnesium, Dissolved	8190 ug/L		5.0	1	10/28/11 08:22	11/03/11 17:46	7439-95-4	
Manganese, Dissolved	211 ug/L		0.50	1	10/28/11 08:22	11/03/11 17:46	7439-96-5	
Nickel, Dissolved	1.3 ug/L		0.50	1	10/28/11 08:22	11/03/11 17:46	7440-02-0	
Potassium, Dissolved	1020 ug/L		20.0	1	10/28/11 08:22	11/04/11 13:12	7440-09-7	
Selenium, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 17:46	7782-49-2	
Silver, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 17:46	7440-22-4	
Sodium, Dissolved	3490 ug/L		50.0	1	10/28/11 08:22	11/03/11 17:46	7440-23-5	
Thallium, Dissolved	ND ug/L		0.10	1	10/28/11 08:22	11/03/11 17:46	7440-28-0	
Vanadium, Dissolved	ND ug/L		0.10	1	10/28/11 08:22	11/03/11 17:46	7440-62-2	
Zinc, Dissolved	164 ug/L		5.0	1	10/28/11 08:22	11/03/11 17:46	7440-66-6	

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ANALYTICAL RESULTS

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

Sample: DR-4-SW **Lab ID: 60108677009** Collected: 10/21/11 11:00 Received: 10/22/11 09:30 Matrix: Water

Comments: • The samples were received outside of required temperature range. Analysis was completed upon client approval.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
245.1 Mercury	Analytical Method: EPA 245.1							
Mercury	ND	ug/L	0.20	1	10/27/11 13:03	10/28/11 14:35	7439-97-6	
245.1 Mercury, Dissolved	Analytical Method: EPA 245.1							
Mercury, Dissolved	ND	ug/L	0.20	1	10/31/11 12:27	11/01/11 11:10	7439-97-6	
2510B Specific Conductance	Analytical Method: SM 2510B							
Specific Conductance	362	umhos/cm	10.0	1		10/27/11 10:24		
Salinity	Analytical Method: Calculated							
Salinity (as dissolved solids)	232	mg/L	6.0	1		10/27/11 16:20		
Salinity (as seawater)	0.17	PSU	0.010	1		10/27/11 16:20		
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity,Bicarbonate (CaCO ₃)	104	mg/L	20.0	1		11/01/11 10:00		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	20.0	1		11/01/11 10:00		
Alkalinity, Total as CaCO ₃	104	mg/L	20.0	1		11/01/11 10:00		
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	228	mg/L	5.0	1		10/28/11 15:03		
2540D Total Suspended Solids	Analytical Method: SM 2540D							
Total Suspended Solids	ND	mg/L	5.0	1		10/27/11 14:48		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	90.5	mg/L	5.0	5		10/31/11 16:53	14808-79-8	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E							
Cyanide	ND	mg/L	0.0050	1		10/28/11 15:11	57-12-5	

ANALYTICAL RESULTS

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

Sample: DR-G **Lab ID: 60108677010** Collected: 10/21/11 11:30 Received: 10/22/11 09:30 Matrix: Water

Comments: • The samples were received outside of required temperature range. Analysis was completed upon client approval.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS		Analytical Method: EPA 200.8						
Aluminum	50.6 ug/L		4.0	1	10/28/11 08:24	11/03/11 07:13	7429-90-5	
Antimony	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 07:13	7440-36-0	
Arsenic	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 07:13	7440-38-2	
Barium	67.9 ug/L		0.30	1	10/28/11 08:24	11/03/11 07:13	7440-39-3	
Beryllium	ND ug/L		0.20	1	10/28/11 08:24	11/03/11 07:13	7440-41-7	
Cadmium	0.49 ug/L		0.080	1	10/28/11 08:24	11/03/11 07:13	7440-43-9	
Calcium	46600 ug/L		100	5	10/28/11 08:24	11/03/11 07:17	7440-70-2	
Chromium	0.52 ug/L		0.50	1	10/28/11 08:24	11/03/11 07:13	7440-47-3	
Copper	1.2 ug/L		0.50	1	10/28/11 08:24	11/03/11 07:13	7440-50-8	
Iron	89.8 ug/L		50.0	1	10/28/11 08:24	11/03/11 07:13	7439-89-6	
Lead	0.24 ug/L		0.10	1	10/28/11 08:24	11/03/11 07:13	7439-92-1	
Magnesium	7540 ug/L		5.0	1	10/28/11 08:24	11/03/11 07:13	7439-95-4	
Manganese	114 ug/L		0.50	1	10/28/11 08:24	11/03/11 07:13	7439-96-5	
Nickel	0.54 ug/L		0.50	1	10/28/11 08:24	11/03/11 07:13	7440-02-0	
Potassium	876 ug/L		20.0	1	10/28/11 08:24	11/03/11 07:13	7440-09-7	
Selenium	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 07:13	7782-49-2	
Silver	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 07:13	7440-22-4	
Sodium	3130 ug/L		50.0	1	10/28/11 08:24	11/03/11 07:13	7440-23-5	
Thallium	ND ug/L		0.10	1	10/28/11 08:24	11/03/11 07:13	7440-28-0	
Total Hardness by 2340B	147000 ug/L		355	5	10/28/11 08:24	11/03/11 07:17		
Vanadium	0.21 ug/L		0.10	1	10/28/11 08:24	11/03/11 07:13	7440-62-2	
Zinc	117 ug/L		5.0	1	10/28/11 08:24	11/03/11 07:13	7440-66-6	
200.8 MET ICPMS, Dissolved		Analytical Method: EPA 200.8						
Aluminum, Dissolved	8.6 ug/L		4.0	1	10/28/11 08:22	11/03/11 17:55	7429-90-5	
Antimony, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 17:55	7440-36-0	
Arsenic, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/04/11 13:20	7440-38-2	
Barium, Dissolved	67.7 ug/L		0.30	1	10/28/11 08:22	11/03/11 17:55	7440-39-3	
Beryllium, Dissolved	ND ug/L		0.20	1	10/28/11 08:22	11/03/11 17:55	7440-41-7	
Cadmium, Dissolved	0.44 ug/L		0.080	1	10/28/11 08:22	11/03/11 17:55	7440-43-9	
Calcium, Dissolved	55300 ug/L		200	10	10/28/11 08:22	11/04/11 13:24	7440-70-2	
Chromium, Dissolved	0.59 ug/L		0.50	1	10/28/11 08:22	11/03/11 17:55	7440-47-3	
Copper, Dissolved	0.86 ug/L		0.50	1	10/28/11 08:22	11/03/11 17:55	7440-50-8	
Iron, Dissolved	ND ug/L		50.0	1	10/28/11 08:22	11/03/11 17:55	7439-89-6	
Lead, Dissolved	ND ug/L		0.10	1	10/28/11 08:22	11/03/11 17:55	7439-92-1	
Magnesium, Dissolved	7370 ug/L		5.0	1	10/28/11 08:22	11/03/11 17:55	7439-95-4	
Manganese, Dissolved	109 ug/L		0.50	1	10/28/11 08:22	11/03/11 17:55	7439-96-5	
Nickel, Dissolved	0.78 ug/L		0.50	1	10/28/11 08:22	11/03/11 17:55	7440-02-0	
Potassium, Dissolved	880 ug/L		20.0	1	10/28/11 08:22	11/04/11 13:20	7440-09-7	
Selenium, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 17:55	7782-49-2	
Silver, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 17:55	7440-22-4	
Sodium, Dissolved	3090 ug/L		50.0	1	10/28/11 08:22	11/03/11 17:55	7440-23-5	
Thallium, Dissolved	ND ug/L		0.10	1	10/28/11 08:22	11/03/11 17:55	7440-28-0	
Vanadium, Dissolved	0.12 ug/L		0.10	1	10/28/11 08:22	11/03/11 17:55	7440-62-2	
Zinc, Dissolved	101 ug/L		5.0	1	10/28/11 08:22	11/03/11 17:55	7440-66-6	

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ANALYTICAL RESULTS

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

Sample: DR-G **Lab ID: 60108677010** Collected: 10/21/11 11:30 Received: 10/22/11 09:30 Matrix: Water

Comments: • The samples were received outside of required temperature range. Analysis was completed upon client approval.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
245.1 Mercury	Analytical Method: EPA 245.1							
Mercury	ND	ug/L	0.20	1	10/27/11 13:03	10/28/11 14:37	7439-97-6	
245.1 Mercury, Dissolved	Analytical Method: EPA 245.1							
Mercury, Dissolved	ND	ug/L	0.20	1	10/31/11 12:27	11/01/11 11:12	7439-97-6	
2510B Specific Conductance	Analytical Method: SM 2510B							
Specific Conductance	340	umhos/cm	10.0	1		10/27/11 10:24		
Salinity	Analytical Method: Calculated							
Salinity (as dissolved solids)	217	mg/L	6.0	1		10/27/11 16:20		
Salinity (as seawater)	0.16	PSU	0.010	1		10/27/11 16:20		
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity,Bicarbonate (CaCO ₃)	112	mg/L	20.0	1		11/01/11 17:00		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	20.0	1		11/01/11 17:00		
Alkalinity, Total as CaCO ₃	112	mg/L	20.0	1		11/01/11 17:00		
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	201	mg/L	5.0	1		10/28/11 15:04		
2540D Total Suspended Solids	Analytical Method: SM 2540D							
Total Suspended Solids	ND	mg/L	5.0	1		10/27/11 14:48		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	69.3	mg/L	5.0	5		10/31/11 17:09	14808-79-8	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E							
Cyanide	ND	mg/L	0.0050	1		10/28/11 15:12	57-12-5	

ANALYTICAL RESULTS

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

Sample: FB Lab ID: 60108677011 Collected: 10/20/11 12:15 Received: 10/22/11 09:30 Matrix: Water

Comments: • The samples were received outside of required temperature range. Analysis was completed upon client approval.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.8 MET ICPMS		Analytical Method: EPA 200.8						
Aluminum	5.5 ug/L		4.0	1	10/28/11 08:24	11/03/11 06:31	7429-90-5	
Antimony	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 06:31	7440-36-0	
Arsenic	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 06:31	7440-38-2	
Barium	ND ug/L		0.30	1	10/28/11 08:24	11/03/11 06:31	7440-39-3	
Beryllium	ND ug/L		0.20	1	10/28/11 08:24	11/03/11 06:31	7440-41-7	
Cadmium	ND ug/L		0.080	1	10/28/11 08:24	11/03/11 06:31	7440-43-9	
Calcium	ND ug/L		20.0	1	10/28/11 08:24	11/03/11 06:31	7440-70-2	
Chromium	0.54 ug/L		0.50	1	10/28/11 08:24	11/03/11 06:31	7440-47-3	
Copper	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 06:31	7440-50-8	
Iron	ND ug/L		50.0	1	10/28/11 08:24	11/03/11 06:31	7439-89-6	
Lead	ND ug/L		0.10	1	10/28/11 08:24	11/03/11 06:31	7439-92-1	
Magnesium	ND ug/L		5.0	1	10/28/11 08:24	11/03/11 06:31	7439-95-4	
Manganese	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 06:31	7439-96-5	
Nickel	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 06:31	7440-02-0	
Potassium	ND ug/L		20.0	1	10/28/11 08:24	11/03/11 06:31	7440-09-7	
Selenium	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 06:31	7782-49-2	
Silver	ND ug/L		0.50	1	10/28/11 08:24	11/03/11 06:31	7440-22-4	
Sodium	ND ug/L		50.0	1	10/28/11 08:24	11/03/11 06:31	7440-23-5	
Thallium	ND ug/L		0.10	1	10/28/11 08:24	11/03/11 06:31	7440-28-0	
Total Hardness by 2340B	ND ug/L		71.0	1	10/28/11 08:24	11/03/11 06:31		
Vanadium	ND ug/L		0.10	1	10/28/11 08:24	11/03/11 06:31	7440-62-2	
Zinc	ND ug/L		5.0	1	10/28/11 08:24	11/03/11 06:31	7440-66-6	
200.8 MET ICPMS, Dissolved		Analytical Method: EPA 200.8						
Aluminum, Dissolved	ND ug/L		4.0	1	10/28/11 08:22	11/03/11 18:05	7429-90-5	
Antimony, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 18:05	7440-36-0	
Arsenic, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/04/11 13:28	7440-38-2	
Barium, Dissolved	ND ug/L		0.30	1	10/28/11 08:22	11/03/11 18:05	7440-39-3	
Beryllium, Dissolved	ND ug/L		0.20	1	10/28/11 08:22	11/03/11 18:05	7440-41-7	
Cadmium, Dissolved	ND ug/L		0.080	1	10/28/11 08:22	11/03/11 18:05	7440-43-9	
Calcium, Dissolved	22.8 ug/L		20.0	1	10/28/11 08:22	11/04/11 13:28	7440-70-2	
Chromium, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 18:05	7440-47-3	
Copper, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 18:05	7440-50-8	
Iron, Dissolved	ND ug/L		50.0	1	10/28/11 08:22	11/03/11 18:05	7439-89-6	
Lead, Dissolved	ND ug/L		0.10	1	10/28/11 08:22	11/03/11 18:05	7439-92-1	
Magnesium, Dissolved	ND ug/L		5.0	1	10/28/11 08:22	11/03/11 18:05	7439-95-4	
Manganese, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 18:05	7439-96-5	
Nickel, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 18:05	7440-02-0	
Potassium, Dissolved	ND ug/L		20.0	1	10/28/11 08:22	11/04/11 13:28	7440-09-7	
Selenium, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 18:05	7782-49-2	
Silver, Dissolved	ND ug/L		0.50	1	10/28/11 08:22	11/03/11 18:05	7440-22-4	
Sodium, Dissolved	ND ug/L		50.0	1	10/28/11 08:22	11/03/11 18:05	7440-23-5	
Thallium, Dissolved	ND ug/L		0.10	1	10/28/11 08:22	11/03/11 18:05	7440-28-0	
Vanadium, Dissolved	ND ug/L		0.10	1	10/28/11 08:22	11/03/11 18:05	7440-62-2	
Zinc, Dissolved	ND ug/L		5.0	1	10/28/11 08:22	11/03/11 18:05	7440-66-6	

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ANALYTICAL RESULTS

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

Sample: FB Lab ID: **60108677011** Collected: 10/20/11 12:15 Received: 10/22/11 09:30 Matrix: Water

Comments: • The samples were received outside of required temperature range. Analysis was completed upon client approval.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
245.1 Mercury	Analytical Method: EPA 245.1							
Mercury	ND ug/L		0.20	1	10/27/11 13:03	10/28/11 14:43	7439-97-6	
245.1 Mercury, Dissolved	Analytical Method: EPA 245.1							
Mercury, Dissolved	ND ug/L		0.20	1	10/31/11 12:27	11/01/11 11:18	7439-97-6	
2510B Specific Conductance	Analytical Method: SM 2510B							
Specific Conductance	ND umhos/cm		10.0	1		10/27/11 10:24		
Salinity	Analytical Method: Calculated							
Salinity (as dissolved solids)	ND mg/L		6.0	1		10/27/11 16:20		
Salinity (as seawater)	0.012 PSU		0.010	1		10/27/11 16:20		
2320B Alkalinity	Analytical Method: SM 2320B							
Alkalinity,Bicarbonate (CaCO3)	ND mg/L		20.0	1		11/01/11 10:00		
Alkalinity, Carbonate (CaCO3)	ND mg/L		20.0	1		11/01/11 10:00		
Alkalinity, Total as CaCO3	ND mg/L		20.0	1		11/01/11 10:00		
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
Total Dissolved Solids	ND mg/L		5.0	1		10/26/11 15:02		
2540D Total Suspended Solids	Analytical Method: SM 2540D							
Total Suspended Solids	ND mg/L		5.0	1		10/27/11 14:46		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Sulfate	ND mg/L		1.0	1		10/31/11 17:26	14808-79-8	
4500CNE Cyanide, Total	Analytical Method: SM 4500-CN-E							
Cyanide	ND mg/L		0.0050	1		10/28/11 15:15	57-12-5	

Appendix D
Laboratory QC Results

QUALITY CONTROL DATA

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

QC Batch:	ICPM/29325	Analysis Method:	EPA 200.8
QC Batch Method:	EPA 200.8	Analysis Description:	200.8 MET
Associated Lab Samples:	60108677001, 60108677002, 60108677003, 60108677004, 60108677005, 60108677006, 60108677007, 60108677008		

METHOD BLANK: 1086174 Matrix: Water

Associated Lab Samples: 60108677001, 60108677002, 60108677003, 60108677004, 60108677005, 60108677006, 60108677007, 60108677008, 60108677009, 60108677010, 60108677011, 60108677012, 60108677013, 60108677014, 60108677015, 60108677016, 60108677017, 60108677018, 60108677019, 60108677020

Parameter	Units	Blank	Reporting		Qualifiers
		Result	Limit	Analyzed	
Aluminum	ug/L	ND	4.0	11/03/11 03:58	
Antimony	ug/L	ND	0.50	11/03/11 03:58	
Arsenic	ug/L	ND	0.50	11/03/11 03:58	
Barium	ug/L	ND	0.30	11/03/11 03:58	
Beryllium	ug/L	ND	0.20	11/03/11 03:58	
Cadmium	ug/L	ND	0.080	11/03/11 03:58	
Calcium	ug/L	ND	20.0	11/03/11 03:58	
Chromium	ug/L	ND	0.50	11/03/11 03:58	
Copper	ug/L	ND	0.50	11/03/11 03:58	
Iron	ug/L	ND	50.0	11/03/11 03:58	
Lead	ug/L	ND	0.10	11/03/11 03:58	
Magnesium	ug/L	ND	5.0	11/03/11 03:58	
Manganese	ug/L	ND	0.50	11/03/11 03:58	
Nickel	ug/L	ND	0.50	11/03/11 03:58	
Potassium	ug/L	ND	20.0	11/03/11 03:58	
Selenium	ug/L	ND	0.50	11/03/11 03:58	
Silver	ug/L	ND	0.50	11/03/11 03:58	
Sodium	ug/L	ND	50.0	11/03/11 03:58	
Thallium	ug/L	ND	0.10	11/03/11 03:58	
Vanadium	ug/L	ND	0.10	11/03/11 03:58	
Zinc	ug/L	ND	5.0	11/03/11 03:58	

LABORATORY CONTROL SAMPLE: 1086175

Parameter	Units	Spike	LCS	LCS	% Rec	Qualifiers
		Conc.	Result	% Rec	Limits	
Aluminum	ug/L	80	83.9	105	85-115	
Antimony	ug/L	80	80.4	101	85-115	
Arsenic	ug/L	80	77.4	97	85-115	
Barium	ug/L	80	79.5	99	85-115	
Beryllium	ug/L	80	80.3	100	85-115	
Cadmium	ug/L	80	79.7	100	85-115	
Calcium	ug/L	1000	1020	102	85-115	
Chromium	ug/L	80	81.9	102	85-115	
Copper	ug/L	80	82.6	103	85-115	
Iron	ug/L	1000	1030	103	85-115	
Lead	ug/L	80	87.3	109	85-115	
Magnesium	ug/L	1000	1040	104	85-115	
Manganese	ug/L	80	82.3	103	85-115	
Nickel	ug/L	80	81.1	101	85-115	

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QUALITY CONTROL DATA

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

LABORATORY CONTROL SAMPLE: 1086175

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Potassium	ug/L	1000	1020	102	85-115	
Selenium	ug/L	80	79.9	100	85-115	
Silver	ug/L	80	80.3	100	85-115	
Sodium	ug/L	1000	996	100	85-115	
Thallium	ug/L	80	88.5	111	85-115	
Vanadium	ug/L	80	80.4	101	85-115	
Zinc	ug/L	80	85.0	106	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1086176 1086177

Parameter	Units	MS Spike		MSD Spike		MS Result	MS % Rec	MSD % Rec	% Rec Limits	Max		
		60108677001	Result	Conc.	Conc.					RPD	RPD	Qual
Aluminum	ug/L	85.5	80	80	229	232	180	182	70-130	1	20	M1
Antimony	ug/L	ND	80	80	81.4	80.0	102	100	70-130	2	20	
Arsenic	ug/L	ND	80	80	79.7	79.0	99	99	70-130	.8	20	
Barium	ug/L	56.9	80	80	137	137	101	100	70-130	.07	20	
Beryllium	ug/L	ND	80	80	82.6	82.2	103	103	70-130	.5	20	
Cadmium	ug/L	ND	80	80	81.1	80.6	101	101	70-130	.7	20	
Calcium	ug/L	30700	1000	1000	31600	31700	95	104	70-130	.3	20	
Chromium	ug/L	ND	80	80	82.4	83.2	102	103	70-130	1	20	
Copper	ug/L	0.74	80	80	82.8	83.4	103	103	70-130	.6	20	
Iron	ug/L	93.5	1000	1000	1120	1140	102	105	70-130	2	20	
Lead	ug/L	0.12	80	80	87.1	87.6	109	109	70-130	.5	20	
Magnesium	ug/L	5620	1000	1000	6640	6780	102	116	70-130	2	20	
Manganese	ug/L	20.0	80	80	100	103	100	104	70-130	3	20	
Nickel	ug/L	ND	80	80	82.0	82.4	102	103	70-130	.5	20	
Potassium	ug/L	646	1000	1000	1680	1670	104	102	70-130	1	20	
Selenium	ug/L	ND	80	80	82.8	82.4	103	103	70-130	.5	20	
Silver	ug/L	ND	80	80	80.8	79.4	101	99	70-130	2	20	
Sodium	ug/L	2210	1000	1000	3140	3180	94	97	70-130	1	20	
Thallium	ug/L	ND	80	80	93.8	95.0	117	119	70-130	1	20	
Vanadium	ug/L	0.26	80	80	82.2	83.0	102	103	70-130	.9	20	
Zinc	ug/L	ND	80	80	85.8	88.0	102	105	70-130	2	20	

MATRIX SPIKE SAMPLE: 1086178

Parameter	Units	60108677011		Spike		MS Result	MS % Rec	% Rec Limits	Qualifiers		
		Result	Conc.	Conc.	Conc.				RPD	RPD	Qual
Aluminum	ug/L		5.5	80	87.2	102		70-130			
Antimony	ug/L		ND	80	80.6	101		70-130			
Arsenic	ug/L		ND	80	77.5	97		70-130			
Barium	ug/L		ND	80	80.2	100		70-130			
Beryllium	ug/L		ND	80	83.0	104		70-130			
Cadmium	ug/L		ND	80	80.1	100		70-130			
Calcium	ug/L		ND	1000	1010	100		70-130			
Chromium	ug/L	0.54	80	82.8	103			70-130			

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QUALITY CONTROL DATA

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

MATRIX SPIKE SAMPLE: 1086178

Parameter	Units	60108677011		Spike	MS	MS	% Rec	Qualifiers
		Result	Conc.	Result	% Rec	Limits		
Copper	ug/L	ND	80	82.2	102	70-130		
Iron	ug/L	ND	1000	1020	102	70-130		
Lead	ug/L	ND	80	89.0	111	70-130		
Magnesium	ug/L	ND	1000	1060	106	70-130		
Manganese	ug/L	ND	80	82.4	103	70-130		
Nickel	ug/L	ND	80	81.6	101	70-130		
Potassium	ug/L	ND	1000	991	99	70-130		
Selenium	ug/L	ND	80	79.5	99	70-130		
Silver	ug/L	ND	80	78.6	98	70-130		
Sodium	ug/L	ND	1000	890	89	70-130		
Thallium	ug/L	ND	80	95.7	120	70-130		
Vanadium	ug/L	ND	80	81.7	102	70-130		
Zinc	ug/L	ND	80	85.4	104	70-130		

QUALITY CONTROL DATA

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

QC Batch:	ICPM/29327	Analysis Method:	EPA 200.8
QC Batch Method:	EPA 200.8	Analysis Description:	200.8 MET
Associated Lab Samples:	60108677021		

METHOD BLANK: 1086188 Matrix: Water

Associated Lab Samples: 60108677021

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	4.0	11/03/11 03:02	
Antimony	ug/L	ND	0.50	11/03/11 03:02	
Arsenic	ug/L	ND	0.50	11/03/11 03:02	
Barium	ug/L	ND	0.30	11/03/11 03:02	
Beryllium	ug/L	ND	0.20	11/03/11 03:02	
Cadmium	ug/L	ND	0.080	11/03/11 03:02	
Calcium	ug/L	ND	20.0	11/03/11 03:02	
Chromium	ug/L	ND	0.50	11/03/11 03:02	
Copper	ug/L	ND	0.50	11/03/11 03:02	
Iron	ug/L	ND	50.0	11/03/11 03:02	
Lead	ug/L	ND	0.10	11/03/11 03:02	
Magnesium	ug/L	ND	5.0	11/03/11 03:02	
Manganese	ug/L	ND	0.50	11/03/11 03:02	
Nickel	ug/L	ND	0.50	11/03/11 03:02	
Potassium	ug/L	ND	20.0	11/03/11 03:02	
Selenium	ug/L	ND	0.50	11/03/11 03:02	
Silver	ug/L	ND	0.50	11/03/11 03:02	
Sodium	ug/L	ND	50.0	11/03/11 03:02	
Thallium	ug/L	ND	0.10	11/03/11 03:02	
Vanadium	ug/L	ND	0.10	11/03/11 03:02	
Zinc	ug/L	ND	5.0	11/03/11 03:02	

LABORATORY CONTROL SAMPLE: 1086189

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	80	85.2	106	85-115	
Antimony	ug/L	80	79.2	99	85-115	
Arsenic	ug/L	80	78.3	98	85-115	
Barium	ug/L	80	77.9	97	85-115	
Beryllium	ug/L	80	78.6	98	85-115	
Cadmium	ug/L	80	78.0	98	85-115	
Calcium	ug/L	1000	1010	101	85-115	
Chromium	ug/L	80	80.4	101	85-115	
Copper	ug/L	80	81.0	101	85-115	
Iron	ug/L	1000	1010	101	85-115	
Lead	ug/L	80	84.3	105	85-115	
Magnesium	ug/L	1000	1020	102	85-115	
Manganese	ug/L	80	80.3	100	85-115	
Nickel	ug/L	80	80.0	100	85-115	
Potassium	ug/L	1000	1010	101	85-115	
Selenium	ug/L	80	79.2	99	85-115	

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QUALITY CONTROL DATA

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

LABORATORY CONTROL SAMPLE: 1086189

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Silver	ug/L	80	79.6	99	85-115	
Sodium	ug/L	1000	986	99	85-115	
Thallium	ug/L	80	85.7	107	85-115	
Vanadium	ug/L	80	79.5	99	85-115	
Zinc	ug/L	80	82.6	103	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1086190 1086191

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Max RPD	Qual
		60108677021	Result	Spike Conc.	MSD Result						
Aluminum	ug/L	65.4	80	80	165	162	125	120	70-130	2	20
Antimony	ug/L	ND	80	80	79.8	78.2	100	98	70-130	2	20
Arsenic	ug/L	0.72	80	80	81.8	80.6	101	100	70-130	1	20
Barium	ug/L	15.5	80	80	93.2	92.1	97	96	70-130	1	20
Beryllium	ug/L	ND	80	80	81.0	78.4	101	98	70-130	3	20
Cadmium	ug/L	0.78	80	80	80.3	78.9	99	98	70-130	2	20
Calcium	ug/L	193000	1000	1000	194000	188000	50	-530	70-130	3	20 M6
Chromium	ug/L	ND	80	80	80.4	78.8	100	98	70-130	2	20
Copper	ug/L	3.5	80	80	84.4	82.2	101	98	70-130	3	20
Iron	ug/L	538	1000	1000	1520	1510	99	97	70-130	1	20
Lead	ug/L	8.0	80	80	91.6	90.7	104	103	70-130	1	20
Magnesium	ug/L	43600	1000	1000	44400	42800	72	-80	70-130	3	20 M6
Manganese	ug/L	351	80	80	434	421	104	87	70-130	3	20
Nickel	ug/L	0.80	80	80	80.6	78.3	100	97	70-130	3	20
Potassium	ug/L	2440	1000	1000	3380	3320	94	87	70-130	2	20
Selenium	ug/L	ND	80	80	81.3	79.9	101	99	70-130	2	20
Silver	ug/L	ND	80	80	76.1	75.1	95	94	70-130	1	20
Sodium	ug/L	7960	1000	1000	8940	8810	98	85	70-130	1	20
Thallium	ug/L	0.12	80	80	91.2	90.4	114	113	70-130	.9	20
Vanadium	ug/L	0.10	80	80	79.5	78.6	99	98	70-130	1	20
Zinc	ug/L	223	80	80	336	319	142	120	70-130	5	20 M6

QUALITY CONTROL DATA

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

QC Batch: ICPM/29324 Analysis Method: EPA 200.8
QC Batch Method: EPA 200.8 Analysis Description: 200.8 MET Dissolved

Associated Lab Samples: 60108677001, 60108677002, 60108677003, 60108677004, 60108677005, 60108677006, 60108677007,
60108677008, 60108677009, 60108677010

METHOD BLANK: 1086169 Matrix: Water

Associated Lab Samples: 60108677001, 60108677002, 60108677003, 60108677004, 60108677005, 60108677006, 60108677007,
60108677008, 60108677009, 60108677010, 60108677011, 60108677012, 60108677014, 60108677015,
60108677016, 60108677017, 60108677018, 60108677019, 60108677020, 60108677021

Parameter	Units	Blank	Reporting	Analyzed	Qualifiers
		Result	Limit		
Aluminum, Dissolved	ug/L	ND	4.0	11/03/11 15:55	
Antimony, Dissolved	ug/L	ND	0.50	11/03/11 15:55	
Arsenic, Dissolved	ug/L	ND	0.50	11/03/11 15:55	
Barium, Dissolved	ug/L	ND	0.30	11/03/11 15:55	
Beryllium, Dissolved	ug/L	ND	0.20	11/03/11 15:55	
Cadmium, Dissolved	ug/L	ND	0.080	11/03/11 15:55	
Calcium, Dissolved	ug/L	ND	20.0	11/04/11 12:14	
Chromium, Dissolved	ug/L	ND	0.50	11/03/11 15:55	
Copper, Dissolved	ug/L	ND	0.50	11/03/11 15:55	
Iron, Dissolved	ug/L	ND	50.0	11/03/11 15:55	
Lead, Dissolved	ug/L	ND	0.10	11/03/11 15:55	
Magnesium, Dissolved	ug/L	ND	5.0	11/03/11 15:55	
Manganese, Dissolved	ug/L	ND	0.50	11/03/11 15:55	
Nickel, Dissolved	ug/L	ND	0.50	11/03/11 15:55	
Potassium, Dissolved	ug/L	ND	20.0	11/04/11 12:14	
Selenium, Dissolved	ug/L	ND	0.50	11/03/11 15:55	
Silver, Dissolved	ug/L	ND	0.50	11/03/11 15:55	
Sodium, Dissolved	ug/L	ND	50.0	11/03/11 15:55	
Thallium, Dissolved	ug/L	ND	0.10	11/03/11 15:55	
Vanadium, Dissolved	ug/L	ND	0.10	11/03/11 15:55	
Zinc, Dissolved	ug/L	ND	5.0	11/03/11 15:55	

LABORATORY CONTROL SAMPLE: 1086170

Parameter	Units	Spike	LCS	LCS	% Rec	Qualifiers
		Conc.	Result	% Rec	Limits	
Aluminum, Dissolved	ug/L	80	81.6	102	85-115	
Antimony, Dissolved	ug/L	80	80.5	101	85-115	
Arsenic, Dissolved	ug/L	80	78.2	98	85-115	
Barium, Dissolved	ug/L	80	81.5	102	85-115	
Beryllium, Dissolved	ug/L	80	83.7	105	85-115	
Cadmium, Dissolved	ug/L	80	82.0	102	85-115	
Calcium, Dissolved	ug/L	1000	1120	112	85-115	
Chromium, Dissolved	ug/L	80	81.9	102	85-115	
Copper, Dissolved	ug/L	80	81.8	102	85-115	
Iron, Dissolved	ug/L	1000	1060	106	85-115	
Lead, Dissolved	ug/L	80	83.0	104	85-115	
Magnesium, Dissolved	ug/L	1000	1070	107	85-115	
Manganese, Dissolved	ug/L	80	82.5	103	85-115	
Nickel, Dissolved	ug/L	80	83.8	105	85-115	

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QUALITY CONTROL DATA

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

LABORATORY CONTROL SAMPLE: 1086170

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Potassium, Dissolved	ug/L	1000	1040	104	85-115	
Selenium, Dissolved	ug/L	80	83.0	104	85-115	
Silver, Dissolved	ug/L	80	86.1	108	85-115	
Sodium, Dissolved	ug/L	1000	1040	104	85-115	
Thallium, Dissolved	ug/L	80	85.0	106	85-115	
Vanadium, Dissolved	ug/L	80	82.5	103	85-115	
Zinc, Dissolved	ug/L	80	88.6	111	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1086171 1086172

Parameter	Units	MS Spike		MSD Spike		MS Result	MS % Rec	MSD Result	MSD % Rec	% Rec Limits	Max	
		60108677001	Result	Conc.	Conc.						RPD	RPD
Aluminum, Dissolved	ug/L	10.4	80	80	95.8	96.6	107	108	70-130	.8	20	
Antimony, Dissolved	ug/L	ND	80	80	82.2	81.6	103	102	70-130	.8	20	
Arsenic, Dissolved	ug/L	ND	80	80	81.2	81.2	101	101	70-130	0	20	
Barium, Dissolved	ug/L	57.3	80	80	140	137	103	100	70-130	2	20	
Beryllium, Dissolved	ug/L	ND	80	80	82.8	82.3	104	103	70-130	.7	20	
Cadmium, Dissolved	ug/L	ND	80	80	83.0	83.4	104	104	70-130	.4	20	
Calcium, Dissolved	ug/L	36300	1000	1000	36600	36100	34	-23	70-130	2	20	
Chromium, Dissolved	ug/L	ND	80	80	82.0	82.2	102	102	70-130	.2	20	
Copper, Dissolved	ug/L	0.63	80	80	81.6	81.6	101	101	70-130	.1	20	
Iron, Dissolved	ug/L	ND	1000	1000	1050	1040	102	102	70-130	.6	20	
Lead, Dissolved	ug/L	ND	80	80	85.8	85.8	107	107	70-130	.06	20	
Magnesium, Dissolved	ug/L	5600	1000	1000	6430	6260	83	67	70-130	3	20	
Manganese, Dissolved	ug/L	17.7	80	80	99.2	98.0	102	100	70-130	1	20	
Nickel, Dissolved	ug/L	1.1	80	80	84.4	81.9	104	101	70-130	3	20	
Potassium, Dissolved	ug/L	631	1000	1000	1630	1610	100	98	70-130	2	20	
Selenium, Dissolved	ug/L	ND	80	80	81.8	85.5	102	106	70-130	4	20	
Silver, Dissolved	ug/L	ND	80	80	81.2	81.0	101	101	70-130	.2	20	
Sodium, Dissolved	ug/L	2320	1000	1000	3300	3300	99	98	70-130	.06	20	
Thallium, Dissolved	ug/L	ND	80	80	85.3	85.2	107	106	70-130	.2	20	
Vanadium, Dissolved	ug/L	0.11	80	80	80.6	81.3	101	101	70-130	.9	20	
Zinc, Dissolved	ug/L	ND	80	80	85.0	85.4	101	101	70-130	.6	20	

MATRIX SPIKE SAMPLE: 1086173

Parameter	Units	60108677011		Spike		MS Result	MS % Rec	% Rec Limits	Qualifiers	
		Result	Conc.	Conc.	Conc.				Qualifiers	
Aluminum, Dissolved	ug/L		ND	80	80	83.1	100	70-130		
Antimony, Dissolved	ug/L		ND	80	80	80.6	101	70-130		
Arsenic, Dissolved	ug/L		ND	80	80	79.0	99	70-130		
Barium, Dissolved	ug/L		ND	80	80	82.3	103	70-130		
Beryllium, Dissolved	ug/L		ND	80	80	80.3	100	70-130		
Cadmium, Dissolved	ug/L		ND	80	80	80.1	100	70-130		
Calcium, Dissolved	ug/L	22.8	1000		1070		105	70-130		
Chromium, Dissolved	ug/L		ND	80	80	80.9	101	70-130		

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QUALITY CONTROL DATA

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

MATRIX SPIKE SAMPLE: 1086173

Parameter	Units	60108677011		Spike	MS	MS	% Rec	Qualifiers
		Result	Conc.	Result	% Rec	Limits		
Copper, Dissolved	ug/L	ND	80	78.6	98	70-130		
Iron, Dissolved	ug/L	ND	1000	1040	104	70-130		
Lead, Dissolved	ug/L	ND	80	86.8	108	70-130		
Magnesium, Dissolved	ug/L	ND	1000	1060	106	70-130		
Manganese, Dissolved	ug/L	ND	80	82.7	103	70-130		
Nickel, Dissolved	ug/L	ND	80	81.9	102	70-130		
Potassium, Dissolved	ug/L	ND	1000	1030	102	70-130		
Selenium, Dissolved	ug/L	ND	80	79.2	99	70-130		
Silver, Dissolved	ug/L	ND	80	81.4	102	70-130		
Sodium, Dissolved	ug/L	ND	1000	981	98	70-130		
Thallium, Dissolved	ug/L	ND	80	87.1	109	70-130		
Vanadium, Dissolved	ug/L	ND	80	80.9	101	70-130		
Zinc, Dissolved	ug/L	ND	80	82.6	101	70-130		

QUALITY CONTROL DATA

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

QC Batch:	ICPM/29383	Analysis Method:	EPA 6020
QC Batch Method:	EPA 6020	Analysis Description:	6020 MET
Associated Lab Samples:	60108677022		

METHOD BLANK: 1088501 Matrix: Solid

Associated Lab Samples: 60108677022

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	mg/kg	ND	3.9	11/04/11 00:10	
Antimony	mg/kg	ND	0.49	11/04/11 00:10	
Arsenic	mg/kg	ND	0.49	11/04/11 00:10	
Barium	mg/kg	ND	0.29	11/04/11 00:10	
Beryllium	mg/kg	ND	0.20	11/04/11 00:10	
Cadmium	mg/kg	ND	0.078	11/04/11 00:10	
Calcium	mg/kg	ND	49.0	11/04/11 00:10	
Chromium	mg/kg	ND	0.49	11/04/11 00:10	
Copper	mg/kg	ND	0.49	11/04/11 00:10	
Iron	mg/kg	ND	49.0	11/04/11 00:10	
Lead	mg/kg	ND	0.098	11/04/11 00:10	
Magnesium	mg/kg	ND	4.9	11/04/11 00:10	
Manganese	mg/kg	ND	0.49	11/04/11 00:10	
Nickel	mg/kg	ND	0.49	11/04/11 00:10	
Potassium	mg/kg	ND	49.0	11/04/11 00:10	
Selenium	mg/kg	ND	0.49	11/04/11 00:10	
Silver	mg/kg	ND	0.49	11/04/11 00:10	
Sodium	mg/kg	ND	49.0	11/04/11 00:10	
Thallium	mg/kg	ND	0.098	11/04/11 00:10	
Vanadium	mg/kg	ND	0.49	11/04/11 00:10	
Zinc	mg/kg	ND	4.9	11/04/11 00:10	

LABORATORY CONTROL SAMPLE: 1088502

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	mg/kg	20	22.7	114	80-120	
Antimony	mg/kg	20	21.6	108	80-120	
Arsenic	mg/kg	20	20.7	104	80-120	
Barium	mg/kg	20	22.0	110	80-120	
Beryllium	mg/kg	20	23.1	115	80-120	
Cadmium	mg/kg	20	21.7	109	80-120	
Calcium	mg/kg	250	281	112	80-120	
Chromium	mg/kg	20	22.6	113	80-120	
Copper	mg/kg	20	22.4	112	80-120	
Iron	mg/kg	250	280	112	80-120	
Lead	mg/kg	20	21.9	110	80-120	
Magnesium	mg/kg	250	284	114	80-120	
Manganese	mg/kg	20	22.2	111	80-120	
Nickel	mg/kg	20	22.3	111	80-120	
Potassium	mg/kg	250	306	122	80-120	
Selenium	mg/kg	20	20.3	102	80-120	

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QUALITY CONTROL DATA

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

LABORATORY CONTROL SAMPLE: 1088502

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Silver	mg/kg	20	21.5	108	80-120	
Sodium	mg/kg	250	289	116	80-120	
Thallium	mg/kg	20	20.5	103	80-120	
Vanadium	mg/kg	20	22.2	111	80-120	
Zinc	mg/kg	20	21.9	110	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1088503 1088504

Parameter	Units	MS		MSD		MS Result	MS % Rec	MSD % Rec	% Rec Limits	Max		
		60108677022	Result	Spike Conc.	MSD Result					RPD	RPD	Qual
Aluminum	mg/kg	1380	20	19.6	1660	1380	1370	-22	75-125	18	30	M6
Antimony	mg/kg	ND	20	19.6	20.9	19.0	103	96	75-125	10	30	
Arsenic	mg/kg	1.8	20	19.6	22.5	20.5	103	95	75-125	10	30	
Barium	mg/kg	3.9	20	19.6	26.3	24.1	112	103	75-125	9	30	
Beryllium	mg/kg	0.75	20	19.6	22.9	21.3	111	105	75-125	8	30	
Cadmium	mg/kg	2.2	20	19.6	23.9	22.0	109	101	75-125	8	30	
Calcium	mg/kg	770	250	245	971	899	81	53	75-125	8	30	M6
Chromium	mg/kg	1.5	20	19.6	24.1	21.6	113	103	75-125	11	30	
Copper	mg/kg	198	20	19.6	210	187	57	-54	75-125	11	30	M6
Iron	mg/kg	11300	250	245	10800	9510	-178	-726	75-125	13	30	M6
Lead	mg/kg	18.0	20	19.6	38.9	34.5	105	85	75-125	12	30	
Magnesium	mg/kg	427	250	245	699	572	109	59	75-125	20	30	M6
Manganese	mg/kg	147	20	19.6	160	142	65	-29	75-125	12	30	M6
Nickel	mg/kg	1.5	20	19.6	24.0	21.9	113	104	75-125	9	30	
Potassium	mg/kg	138	250	245	487	433	140	120	75-125	12	30	M6
Selenium	mg/kg	ND	20	19.6	21.4	19.5	106	98	75-125	9	30	
Silver	mg/kg	ND	20	19.6	21.3	19.7	106	100	75-125	8	30	
Sodium	mg/kg	ND	250	245	303	284	113	107	75-125	7	30	
Thallium	mg/kg	0.27	20	19.6	20.9	19.2	103	97	75-125	8	30	
Vanadium	mg/kg	0.70	20	19.6	23.5	21.4	114	106	75-125	9	30	
Zinc	mg/kg	366	20	19.6	517	460	758	479	75-125	12	30	M6

QUALITY CONTROL DATA

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

QC Batch:	MERC/6142	Analysis Method:	EPA 245.1
QC Batch Method:	EPA 245.1	Analysis Description:	245.1 Mercury
Associated Lab Samples:	60108677021		

METHOD BLANK: 1085704 Matrix: Water

Associated Lab Samples: 60108677021

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	11/01/11 11:49	

LABORATORY CONTROL SAMPLE: 1085705

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.2	104	85-115	

MATRIX SPIKE SAMPLE: 1085706

Parameter	Units	10173616001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	5	5.1	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1085707 1085708

Parameter	Units	10173723001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Max RPD	Max Qual
Mercury	ug/L	ND	5	5	4.3	5.7	86	114	85-115	28	30	

QUALITY CONTROL DATA

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

QC Batch:	MERC/6145	Analysis Method:	EPA 245.1
QC Batch Method:	EPA 245.1	Analysis Description:	245.1 Mercury
Associated Lab Samples: 60108677001, 60108677002, 60108677003, 60108677004, 60108677005, 60108677006, 60108677007, 60108677008, 60108677009, 60108677010, 60108677011, 60108677012, 60108677013, 60108677014, 60108677015, 60108677016, 60108677017, 60108677018, 60108677019, 60108677020			

METHOD BLANK: 1086061 Matrix: Water

Associated Lab Samples: 60108677001, 60108677002, 60108677003, 60108677004, 60108677005, 60108677006, 60108677007, 60108677008, 60108677009, 60108677010, 60108677011, 60108677012, 60108677013, 60108677014, 60108677015, 60108677016, 60108677017, 60108677018, 60108677019, 60108677020

Parameter	Units	Blank	Reporting	Analyzed	Qualifiers
		Result	Limit		
Mercury	ug/L	ND	0.20	10/28/11 14:06	

LABORATORY CONTROL SAMPLE: 1086062

Parameter	Units	Spike	LCS	LCS	% Rec	Qualifiers
		Conc.	Result	% Rec	Limits	
Mercury	ug/L	5	5.5	110	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1086063 1086064

Parameter	Units	MS	MSD	MS	MSD	MS	MSD	% Rec	% Rec	Max	RPD	RPD	Qual
		60108677001	Spike										
Mercury	ug/L	ND	5	5	5.6	5.6	5.6	109	109	85-115	0	30	

MATRIX SPIKE SAMPLE: 1086065

Parameter	Units	60108677020	Spike	MS	MS	% Rec	% Rec	Qualifiers
		Result	Conc.	Result	% Rec	Limits		
Mercury	ug/L	ND	5	4.9	96	85-115		

QUALITY CONTROL DATA

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

QC Batch:	MERC/6144	Analysis Method:	EPA 245.1
QC Batch Method:	EPA 245.1	Analysis Description:	245.1 Mercury - Dissolved

Associated Lab Samples: 60108677001, 60108677002, 60108677003, 60108677004, 60108677005, 60108677006, 60108677007, 60108677008, 60108677009, 60108677010, 60108677011, 60108677012, 60108677014, 60108677015, 60108677016, 60108677017, 60108677018, 60108677019, 60108677020, 60108677021

METHOD BLANK: 1086056 Matrix: Water

Associated Lab Samples: 60108677001, 60108677002, 60108677003, 60108677004, 60108677005, 60108677006, 60108677007, 60108677008, 60108677009, 60108677010, 60108677011, 60108677012, 60108677014, 60108677015, 60108677016, 60108677017, 60108677018, 60108677019, 60108677020, 60108677021

Parameter	Units	Blank	Reporting	Analyzed	Qualifiers
		Result	Limit		
Mercury, Dissolved	ug/L	ND	0.20	11/01/11 10:41	

LABORATORY CONTROL SAMPLE: 1086057

Parameter	Units	Spike	LCS	LCS	% Rec	Qualifiers
		Conc.	Result	% Rec	Limits	
Mercury, Dissolved	ug/L	5	5.2	105	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1086058 1086059

Parameter	Units	MS	MSD	MS	MSD	MS	MSD	% Rec	% Rec	Max	RPD	RPD	Qual
		60108677001	Spike										
Mercury, Dissolved	ug/L	ND	5	5	5.4	5.0	107	99	85-115	7	20		

MATRIX SPIKE SAMPLE: 1086060

Parameter	Units	60108677021		Spike	MS	MS	% Rec	% Rec	Qualifiers
		Result	Conc.	Conc.	Result	% Rec	Limits		
Mercury, Dissolved	ug/L	ND	5	5	5.8	117	85-115	M1	

QUALITY CONTROL DATA

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

QC Batch:	MERC/6147	Analysis Method:	EPA 7471
QC Batch Method:	EPA 7471	Analysis Description:	7471 Mercury
Associated Lab Samples:	60108677022		

METHOD BLANK: 1086628 Matrix: Solid

Associated Lab Samples: 60108677022

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.018	11/02/11 10:49	

LABORATORY CONTROL SAMPLE: 1086629

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	.5	0.51	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1086630 1086631

Parameter	Units	10171628003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Max RPD	Qual
Mercury	mg/kg	0.027	.635	.675	0.77	0.77	117	109	80-120	.2	20	

QUALITY CONTROL DATA

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

QC Batch:	MT/7481	Analysis Method:	SM 2510B
QC Batch Method:	SM 2510B	Analysis Description:	2510B Specific Conductance
Associated Lab Samples:	60108677001, 60108677002, 60108677003, 60108677004, 60108677005, 60108677006, 60108677007, 60108677008, 60108677009, 60108677010, 60108677011, 60108677012, 60108677014, 60108677015, 60108677016, 60108677017, 60108677018, 60108677019, 60108677020, 60108677021		

METHOD BLANK: 1086275 Matrix: Water

Associated Lab Samples: 60108677001, 60108677002, 60108677003, 60108677004, 60108677005, 60108677006, 60108677007,
60108677008, 60108677009, 60108677010, 60108677011, 60108677012, 60108677014, 60108677015,
60108677016, 60108677017, 60108677018, 60108677019, 60108677020, 60108677021

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Specific Conductance	umhos/cm	ND	10.0	10/27/11 10:24	

LABORATORY CONTROL SAMPLE: 1086276

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Specific Conductance	umhos/cm	1000	995	100	90-110	

SAMPLE DUPLICATE: 1086277

Parameter	Units	60108677001 Result	Dup Result	RPD	Max RPD	Qualifiers
Specific Conductance	umhos/cm	226	231	2	20	

SAMPLE DUPLICATE: 1086278

Parameter	Units	60108677021 Result	Dup Result	RPD	Max RPD	Qualifiers
Specific Conductance	umhos/cm	1210	1210	.6	20	

QUALITY CONTROL DATA

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

QC Batch:	WET/31796	Analysis Method:	SM 2320B
QC Batch Method:	SM 2320B	Analysis Description:	2320B Alkalinity
Associated Lab Samples:	60108677001, 60108677002, 60108677003, 60108677004, 60108677005, 60108677006, 60108677007, 60108677008, 60108677009, 60108677011, 60108677012		

METHOD BLANK: 902509 Matrix: Water

Associated Lab Samples: 60108677001, 60108677002, 60108677003, 60108677004, 60108677005, 60108677006, 60108677007,
60108677008, 60108677009, 60108677011, 60108677012

Parameter	Units	Blank	Reporting		Qualifiers
		Result	Limit	Analyzed	
Alkalinity, Carbonate (CaCO ₃)	mg/L	ND	20.0	11/01/11 10:00	
Alkalinity, Total as CaCO ₃	mg/L	ND	20.0	11/01/11 10:00	
Alkalinity,Bicarbonate (CaCO ₃)	mg/L	ND	20.0	11/01/11 10:00	

LABORATORY CONTROL SAMPLE: 902510

Parameter	Units	Spike	LCS	LCS	% Rec	Qualifiers
		Conc.	Result	% Rec	Limits	
Alkalinity, Total as CaCO ₃	mg/L	500	494	99	90-110	

SAMPLE DUPLICATE: 902511

Parameter	Units	60108628002	Dup	RPD	Max	Qualifiers
		Result	Result		RPD	
Alkalinity, Carbonate (CaCO ₃)	mg/L	ND	ND		24	
Alkalinity, Total as CaCO ₃	mg/L	288	284	1	9	
Alkalinity,Bicarbonate (CaCO ₃)	mg/L	288	284	1	9	

SAMPLE DUPLICATE: 902512

Parameter	Units	60108677003	Dup	RPD	Max	Qualifiers
		Result	Result		RPD	
Alkalinity, Carbonate (CaCO ₃)	mg/L	ND	ND		24	
Alkalinity, Total as CaCO ₃	mg/L	108	110	2	9	
Alkalinity,Bicarbonate (CaCO ₃)	mg/L	108	110	2	9	

QUALITY CONTROL DATA

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

QC Batch:	WET/31808	Analysis Method:	SM 2320B
QC Batch Method:	SM 2320B	Analysis Description:	2320B Alkalinity
Associated Lab Samples:	60108677010, 60108677014, 60108677015, 60108677016, 60108677017, 60108677018, 60108677019, 60108677020, 60108677021		

METHOD BLANK: 902839 Matrix: Water

Associated Lab Samples: 60108677010, 60108677014, 60108677015, 60108677016, 60108677017, 60108677018, 60108677019,
60108677020, 60108677021

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Carbonate (CaCO ₃)	mg/L	ND	20.0	11/01/11 17:00	
Alkalinity, Total as CaCO ₃	mg/L	ND	20.0	11/01/11 17:00	
Alkalinity,Bicarbonate (CaCO ₃)	mg/L	ND	20.0	11/01/11 17:00	

LABORATORY CONTROL SAMPLE: 902840

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	500	512	102	90-110	

SAMPLE DUPLICATE: 902841

Parameter	Units	60108878001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Carbonate (CaCO ₃)	mg/L	24.0	24.0	0	24	
Alkalinity, Total as CaCO ₃	mg/L	74.0	80.0	8	9	
Alkalinity,Bicarbonate (CaCO ₃)	mg/L	50.0	56.0	11	9 R1	

SAMPLE DUPLICATE: 902842

Parameter	Units	60108878002 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Carbonate (CaCO ₃)	mg/L	8.0J	8J		24	
Alkalinity, Total as CaCO ₃	mg/L	88.0	88.0	0	9	
Alkalinity,Bicarbonate (CaCO ₃)	mg/L	80.0	80.0	0	9	

QUALITY CONTROL DATA

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

QC Batch: WET/31688 Analysis Method: SM 2540C

QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids

Associated Lab Samples: 60108677001, 60108677002

METHOD BLANK: 898419 Matrix: Water

Associated Lab Samples: 60108677001, 60108677002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	5.0	10/26/11 14:56	

SAMPLE DUPLICATE: 898420

Parameter	Units	60108732001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	868	898	3	17	

SAMPLE DUPLICATE: 899216

Parameter	Units	60108430001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	554	570	3	17	

QUALITY CONTROL DATA

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

QC Batch:	WET/31689	Analysis Method:	SM 2540C
QC Batch Method:	SM 2540C	Analysis Description:	2540C Total Dissolved Solids
Associated Lab Samples:	60108677003, 60108677004, 60108677005, 60108677006, 60108677007, 60108677008, 60108677011, 60108677012		

METHOD BLANK: 898428 Matrix: Water

Associated Lab Samples: 60108677003, 60108677004, 60108677005, 60108677006, 60108677007, 60108677008, 60108677011, 60108677012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	5.0	10/26/11 15:00	

SAMPLE DUPLICATE: 898429

Parameter	Units	60108677003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	917	923	1	17	

QUALITY CONTROL DATA

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

QC Batch:	WET/31744	Analysis Method:	SM 2540C
QC Batch Method:	SM 2540C	Analysis Description:	2540C Total Dissolved Solids
Associated Lab Samples:	60108677009, 60108677010, 60108677014, 60108677015, 60108677016, 60108677017, 60108677018, 60108677019, 60108677020, 60108677021		

METHOD BLANK:	900363	Matrix:	Water
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Associated Lab Samples:	60108677009, 60108677010, 60108677014, 60108677015, 60108677016, 60108677017, 60108677018, 60108677019, 60108677020, 60108677021		
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Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	5.0	10/28/11 15:03	

SAMPLE DUPLICATE: 900364

Parameter	Units	60108677009 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	228	235	3	17	

SAMPLE DUPLICATE: 900365

Parameter	Units	60108715001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	617	608	1	17	

QUALITY CONTROL DATA

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

QC Batch:	WET/31715	Analysis Method:	SM 2540D
QC Batch Method:	SM 2540D	Analysis Description:	2540D Total Suspended Solids
Associated Lab Samples:	60108677001, 60108677002, 60108677003, 60108677004, 60108677005, 60108677006, 60108677007, 60108677008, 60108677009, 60108677010, 60108677011, 60108677012		

METHOD BLANK:	899203	Matrix:	Water
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Associated Lab Samples:	60108677001, 60108677002, 60108677003, 60108677004, 60108677005, 60108677006, 60108677007, 60108677008, 60108677009, 60108677010, 60108677011, 60108677012
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Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	10/27/11 14:43	

SAMPLE DUPLICATE: 899204

Parameter	Units	60108677001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	ND	ND		25	

SAMPLE DUPLICATE: 899205

Parameter	Units	60108619001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	ND	ND		25	

QUALITY CONTROL DATA

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

QC Batch:	WET/31745	Analysis Method:	SM 2540D
QC Batch Method:	SM 2540D	Analysis Description:	2540D Total Suspended Solids
Associated Lab Samples:	60108677014, 60108677015, 60108677016, 60108677017, 60108677018, 60108677019, 60108677020, 60108677021		

METHOD BLANK: 900371 Matrix: Water

Associated Lab Samples: 60108677014, 60108677015, 60108677016, 60108677017, 60108677018, 60108677019, 60108677020,
60108677021

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	10/28/11 14:38	

SAMPLE DUPLICATE: 900372

Parameter	Units	60108677014 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	128	128	0	25	

SAMPLE DUPLICATE: 900373

Parameter	Units	60108693001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	43.0	42.0	2	25	

QUALITY CONTROL DATA

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

QC Batch: WET/31668 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60108677020

SAMPLE DUPLICATE: 897923

Parameter	Units	60108677020 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	2.6	2.6	0	5	H6

QUALITY CONTROL DATA

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

QC Batch: WETA/18092 Analysis Method: EPA 300.0

QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions

Associated Lab Samples: 60108677001, 60108677002, 60108677003, 60108677004, 60108677005, 60108677006, 60108677007

METHOD BLANK: 900444 Matrix: Water

Associated Lab Samples: 60108677001, 60108677002, 60108677003, 60108677004, 60108677005, 60108677006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	ND	1.0	10/29/11 00:02	

METHOD BLANK: 902767 Matrix: Water

Associated Lab Samples: 60108677007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	ND	1.0	10/31/11 09:59	

LABORATORY CONTROL SAMPLE: 900445

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	5	5.0	99	90-110	

LABORATORY CONTROL SAMPLE: 902768

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	5	5.0	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 900446 900447

Parameter	Units	MS Result	MS Spike Conc.	MS Result	MS % Rec	MS Result	MS % Rec	% Rec Limits	RPD	RPD	Max Qual
Sulfate	mg/L	303	100	100	399	394	97	91	61-119	1	10

MATRIX SPIKE SAMPLE: 900448

Parameter	Units	Result	MS % Rec	MS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	74.8	50	127	104	61-119

QUALITY CONTROL DATA

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

QC Batch:	WETA/18102	Analysis Method:	EPA 300.0
QC Batch Method:	EPA 300.0	Analysis Description:	300.0 IC Anions
Associated Lab Samples:	60108677008, 60108677009, 60108677010, 60108677011, 60108677012, 60108677014, 60108677015, 60108677016, 60108677017, 60108677018, 60108677019, 60108677020, 60108677021		

METHOD BLANK: 901968 Matrix: Water

Associated Lab Samples: 60108677008, 60108677009, 60108677010, 60108677011, 60108677015, 60108677016, 60108677017,
60108677018, 60108677019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	ND	1.0	10/31/11 14:40	

METHOD BLANK: 903763 Matrix: Water

Associated Lab Samples: 60108677012, 60108677014, 60108677020, 60108677021

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	ND	1.0	11/01/11 10:49	

LABORATORY CONTROL SAMPLE: 901969

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	5	5.1	103	90-110	

LABORATORY CONTROL SAMPLE: 903764

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	5	5.0	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 901970 901971

Parameter	Units	Result	MS	MSD	MS	MSD	MS	MSD	% Rec	% Rec	Max
			Spike Conc.	Spike Conc.							
Sulfate	mg/L	ND	50000	50000	54300	54200	106	106	61-119	0	10

MATRIX SPIKE SAMPLE: 901972

Parameter	Units	Result	60108677017	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
			Result	Conc.	Result	% Rec	Limits	
Sulfate	mg/L	1300	500	1710	83		61-119	

QUALITY CONTROL DATA

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

QC Batch:	WETA/18081	Analysis Method:	SM 4500-CN-E
QC Batch Method:	SM 4500-CN-E	Analysis Description:	4500CNE Cyanide, Total
Associated Lab Samples:	60108677001, 60108677002, 60108677003, 60108677004, 60108677005, 60108677006, 60108677007, 60108677008, 60108677009, 60108677010, 60108677011, 60108677012, 60108677014, 60108677015, 60108677016, 60108677017, 60108677018, 60108677019, 60108677020, 60108677021		

METHOD BLANK: 900263 Matrix: Water

Associated Lab Samples: 60108677001, 60108677002, 60108677003, 60108677004, 60108677005, 60108677006, 60108677007, 60108677008, 60108677009, 60108677010, 60108677011, 60108677012, 60108677014, 60108677015, 60108677016, 60108677017, 60108677018, 60108677019, 60108677020, 60108677021

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cyanide	mg/L	ND	0.0050	10/28/11 14:56	

LABORATORY CONTROL SAMPLE: 900264

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide	mg/L	.1	0.092	92	69-126	

MATRIX SPIKE SAMPLE: 900265

Parameter	Units	60108677001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Cyanide	mg/L	ND	.1	0.10	104	41-136	

SAMPLE DUPLICATE: 900266

Parameter	Units	60108677002 Result	Dup Result	RPD	Max RPD	Qualifiers
Cyanide	mg/L	ND	ND		26	

QUALIFIERS

Project: RICO WATER SAMPLING

Pace Project No.: 60108677

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

LABORATORIES

PASI-K Pace Analytical Services - Kansas City

PASI-M Pace Analytical Services - Minneapolis

ANALYTE QUALIFIERS

H6 Analysis initiated more than 15 minutes after sample collection.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

M6 Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

R1 RPD value was outside control limits.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: RICO WATER SAMPLING
Pace Project No.: 60108677

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60108677001	DR-1	EPA 200.8	ICPM/29325	EPA 200.8	ICPM/11753
60108677002	DR-2	EPA 200.8	ICPM/29325	EPA 200.8	ICPM/11753
60108677003	DR-3	EPA 200.8	ICPM/29325	EPA 200.8	ICPM/11753
60108677004	DR-4	EPA 200.8	ICPM/29325	EPA 200.8	ICPM/11753
60108677005	DR-5	EPA 200.8	ICPM/29325	EPA 200.8	ICPM/11753
60108677006	DR-6	EPA 200.8	ICPM/29325	EPA 200.8	ICPM/11753
60108677007	DR-7	EPA 200.8	ICPM/29325	EPA 200.8	ICPM/11753
60108677008	DR-8	EPA 200.8	ICPM/29325	EPA 200.8	ICPM/11753
60108677009	DR-4-SW	EPA 200.8	ICPM/29325	EPA 200.8	ICPM/11753
60108677010	DR-G	EPA 200.8	ICPM/29325	EPA 200.8	ICPM/11753
60108677011	FB	EPA 200.8	ICPM/29325	EPA 200.8	ICPM/11753
60108677012	HT	EPA 200.8	ICPM/29325	EPA 200.8	ICPM/11753
60108677013	GW-AT-2 WATER	EPA 200.8	ICPM/29325	EPA 200.8	ICPM/11753
60108677014	GW-1	EPA 200.8	ICPM/29325	EPA 200.8	ICPM/11753
60108677015	GW-3	EPA 200.8	ICPM/29325	EPA 200.8	ICPM/11753
60108677016	GW-4	EPA 200.8	ICPM/29325	EPA 200.8	ICPM/11753
60108677017	GW-5	EPA 200.8	ICPM/29325	EPA 200.8	ICPM/11753
60108677018	GW-7	EPA 200.8	ICPM/29325	EPA 200.8	ICPM/11753
60108677019	EB-1	EPA 200.8	ICPM/29325	EPA 200.8	ICPM/11753
60108677020	EB-2	EPA 200.8	ICPM/29325	EPA 200.8	ICPM/11753
60108677021	POND-18	EPA 200.8	ICPM/29327	EPA 200.8	ICPM/11766
60108677001	DR-1	EPA 200.8	ICPM/29324	EPA 200.8	ICPM/11755
60108677002	DR-2	EPA 200.8	ICPM/29324	EPA 200.8	ICPM/11755
60108677003	DR-3	EPA 200.8	ICPM/29324	EPA 200.8	ICPM/11755
60108677004	DR-4	EPA 200.8	ICPM/29324	EPA 200.8	ICPM/11755
60108677005	DR-5	EPA 200.8	ICPM/29324	EPA 200.8	ICPM/11755
60108677006	DR-6	EPA 200.8	ICPM/29324	EPA 200.8	ICPM/11755
60108677007	DR-7	EPA 200.8	ICPM/29324	EPA 200.8	ICPM/11755
60108677008	DR-8	EPA 200.8	ICPM/29324	EPA 200.8	ICPM/11755
60108677009	DR-4-SW	EPA 200.8	ICPM/29324	EPA 200.8	ICPM/11755
60108677010	DR-G	EPA 200.8	ICPM/29324	EPA 200.8	ICPM/11755
60108677011	FB	EPA 200.8	ICPM/29324	EPA 200.8	ICPM/11755
60108677012	HT	EPA 200.8	ICPM/29324	EPA 200.8	ICPM/11755
60108677014	GW-1	EPA 200.8	ICPM/29324	EPA 200.8	ICPM/11755
60108677015	GW-3	EPA 200.8	ICPM/29324	EPA 200.8	ICPM/11755
60108677016	GW-4	EPA 200.8	ICPM/29324	EPA 200.8	ICPM/11755
60108677017	GW-5	EPA 200.8	ICPM/29324	EPA 200.8	ICPM/11755
60108677018	GW-7	EPA 200.8	ICPM/29324	EPA 200.8	ICPM/11755
60108677019	EB-1	EPA 200.8	ICPM/29324	EPA 200.8	ICPM/11755
60108677020	EB-2	EPA 200.8	ICPM/29324	EPA 200.8	ICPM/11755
60108677021	POND-18	EPA 200.8	ICPM/29324	EPA 200.8	ICPM/11755
60108677022	GW-AT-2 SOIL	EPA 6020	ICPM/29383	EPA 6020	ICPM/11764
60108677001	DR-1	EPA 245.1	MERC/6145	EPA 245.1	MERC/6947
60108677002	DR-2	EPA 245.1	MERC/6145	EPA 245.1	MERC/6947
60108677003	DR-3	EPA 245.1	MERC/6145	EPA 245.1	MERC/6947
60108677004	DR-4	EPA 245.1	MERC/6145	EPA 245.1	MERC/6947
60108677005	DR-5	EPA 245.1	MERC/6145	EPA 245.1	MERC/6947

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: RICO WATER SAMPLING
Pace Project No.: 60108677

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60108677006	DR-6	EPA 245.1	MERC/6145	EPA 245.1	MERC/6947
60108677007	DR-7	EPA 245.1	MERC/6145	EPA 245.1	MERC/6947
60108677008	DR-8	EPA 245.1	MERC/6145	EPA 245.1	MERC/6947
60108677009	DR-4-SW	EPA 245.1	MERC/6145	EPA 245.1	MERC/6947
60108677010	DR-G	EPA 245.1	MERC/6145	EPA 245.1	MERC/6947
60108677011	FB	EPA 245.1	MERC/6145	EPA 245.1	MERC/6947
60108677012	HT	EPA 245.1	MERC/6145	EPA 245.1	MERC/6947
60108677013	GW-AT-2 WATER	EPA 245.1	MERC/6145	EPA 245.1	MERC/6947
60108677014	GW-1	EPA 245.1	MERC/6145	EPA 245.1	MERC/6947
60108677015	GW-3	EPA 245.1	MERC/6145	EPA 245.1	MERC/6947
60108677016	GW-4	EPA 245.1	MERC/6145	EPA 245.1	MERC/6947
60108677017	GW-5	EPA 245.1	MERC/6145	EPA 245.1	MERC/6947
60108677018	GW-7	EPA 245.1	MERC/6145	EPA 245.1	MERC/6947
60108677019	EB-1	EPA 245.1	MERC/6145	EPA 245.1	MERC/6947
60108677020	EB-2	EPA 245.1	MERC/6145	EPA 245.1	MERC/6947
60108677021	POND-18	EPA 245.1	MERC/6142	EPA 245.1	MERC/6953
60108677001	DR-1	EPA 245.1	MERC/6144	EPA 245.1	MERC/6955
60108677002	DR-2	EPA 245.1	MERC/6144	EPA 245.1	MERC/6955
60108677003	DR-3	EPA 245.1	MERC/6144	EPA 245.1	MERC/6955
60108677004	DR-4	EPA 245.1	MERC/6144	EPA 245.1	MERC/6955
60108677005	DR-5	EPA 245.1	MERC/6144	EPA 245.1	MERC/6955
60108677006	DR-6	EPA 245.1	MERC/6144	EPA 245.1	MERC/6955
60108677007	DR-7	EPA 245.1	MERC/6144	EPA 245.1	MERC/6955
60108677008	DR-8	EPA 245.1	MERC/6144	EPA 245.1	MERC/6955
60108677009	DR-4-SW	EPA 245.1	MERC/6144	EPA 245.1	MERC/6955
60108677010	DR-G	EPA 245.1	MERC/6144	EPA 245.1	MERC/6955
60108677011	FB	EPA 245.1	MERC/6144	EPA 245.1	MERC/6955
60108677012	HT	EPA 245.1	MERC/6144	EPA 245.1	MERC/6955
60108677014	GW-1	EPA 245.1	MERC/6144	EPA 245.1	MERC/6955
60108677015	GW-3	EPA 245.1	MERC/6144	EPA 245.1	MERC/6955
60108677016	GW-4	EPA 245.1	MERC/6144	EPA 245.1	MERC/6955
60108677017	GW-5	EPA 245.1	MERC/6144	EPA 245.1	MERC/6955
60108677018	GW-7	EPA 245.1	MERC/6144	EPA 245.1	MERC/6955
60108677019	EB-1	EPA 245.1	MERC/6144	EPA 245.1	MERC/6955
60108677020	EB-2	EPA 245.1	MERC/6144	EPA 245.1	MERC/6955
60108677021	POND-18	EPA 245.1	MERC/6144	EPA 245.1	MERC/6955
60108677022	GW-AT-2 SOIL	EPA 7471	MERC/6147	EPA 7471	MERC/6956
60108677001	DR-1	SM 2510B	MT/7481		
60108677002	DR-2	SM 2510B	MT/7481		
60108677003	DR-3	SM 2510B	MT/7481		
60108677004	DR-4	SM 2510B	MT/7481		
60108677005	DR-5	SM 2510B	MT/7481		
60108677006	DR-6	SM 2510B	MT/7481		
60108677007	DR-7	SM 2510B	MT/7481		
60108677008	DR-8	SM 2510B	MT/7481		
60108677009	DR-4-SW	SM 2510B	MT/7481		
60108677010	DR-G	SM 2510B	MT/7481		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: RICO WATER SAMPLING
Pace Project No.: 60108677

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60108677011	FB	SM 2510B	MT/7481		
60108677012	HT	SM 2510B	MT/7481		
60108677014	GW-1	SM 2510B	MT/7481		
60108677015	GW-3	SM 2510B	MT/7481		
60108677016	GW-4	SM 2510B	MT/7481		
60108677017	GW-5	SM 2510B	MT/7481		
60108677018	GW-7	SM 2510B	MT/7481		
60108677019	EB-1	SM 2510B	MT/7481		
60108677020	EB-2	SM 2510B	MT/7481		
60108677021	POND-18	SM 2510B	MT/7481		
60108677001	DR-1	Calculated	MT/7495		
60108677002	DR-2	Calculated	MT/7495		
60108677003	DR-3	Calculated	MT/7495		
60108677004	DR-4	Calculated	MT/7495		
60108677005	DR-5	Calculated	MT/7495		
60108677006	DR-6	Calculated	MT/7495		
60108677007	DR-7	Calculated	MT/7495		
60108677008	DR-8	Calculated	MT/7495		
60108677009	DR-4-SW	Calculated	MT/7495		
60108677010	DR-G	Calculated	MT/7495		
60108677011	FB	Calculated	MT/7495		
60108677012	HT	Calculated	MT/7495		
60108677014	GW-1	Calculated	MT/7495		
60108677015	GW-3	Calculated	MT/7495		
60108677016	GW-4	Calculated	MT/7495		
60108677017	GW-5	Calculated	MT/7495		
60108677018	GW-7	Calculated	MT/7495		
60108677019	EB-1	Calculated	MT/7495		
60108677020	EB-2	Calculated	MT/7495		
60108677021	POND-18	Calculated	MT/7495		
60108677001	DR-1	SM 2320B	WET/31796		
60108677002	DR-2	SM 2320B	WET/31796		
60108677003	DR-3	SM 2320B	WET/31796		
60108677004	DR-4	SM 2320B	WET/31796		
60108677005	DR-5	SM 2320B	WET/31796		
60108677006	DR-6	SM 2320B	WET/31796		
60108677007	DR-7	SM 2320B	WET/31796		
60108677008	DR-8	SM 2320B	WET/31796		
60108677009	DR-4-SW	SM 2320B	WET/31796		
60108677010	DR-G	SM 2320B	WET/31808		
60108677011	FB	SM 2320B	WET/31796		
60108677012	HT	SM 2320B	WET/31796		
60108677014	GW-1	SM 2320B	WET/31808		
60108677015	GW-3	SM 2320B	WET/31808		
60108677016	GW-4	SM 2320B	WET/31808		
60108677017	GW-5	SM 2320B	WET/31808		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: RICO WATER SAMPLING
Pace Project No.: 60108677

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60108677018	GW-7	SM 2320B	WET/31808		
60108677019	EB-1	SM 2320B	WET/31808		
60108677020	EB-2	SM 2320B	WET/31808		
60108677021	POND-18	SM 2320B	WET/31808		
60108677001	DR-1	SM 2540C	WET/31688		
60108677002	DR-2	SM 2540C	WET/31688		
60108677003	DR-3	SM 2540C	WET/31689		
60108677004	DR-4	SM 2540C	WET/31689		
60108677005	DR-5	SM 2540C	WET/31689		
60108677006	DR-6	SM 2540C	WET/31689		
60108677007	DR-7	SM 2540C	WET/31689		
60108677008	DR-8	SM 2540C	WET/31689		
60108677009	DR-4-SW	SM 2540C	WET/31744		
60108677010	DR-G	SM 2540C	WET/31744		
60108677011	FB	SM 2540C	WET/31689		
60108677012	HT	SM 2540C	WET/31689		
60108677014	GW-1	SM 2540C	WET/31744		
60108677015	GW-3	SM 2540C	WET/31744		
60108677016	GW-4	SM 2540C	WET/31744		
60108677017	GW-5	SM 2540C	WET/31744		
60108677018	GW-7	SM 2540C	WET/31744		
60108677019	EB-1	SM 2540C	WET/31744		
60108677020	EB-2	SM 2540C	WET/31744		
60108677021	POND-18	SM 2540C	WET/31744		
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60108677002	DR-2	SM 2540D	WET/31715		
60108677003	DR-3	SM 2540D	WET/31715		
60108677004	DR-4	SM 2540D	WET/31715		
60108677005	DR-5	SM 2540D	WET/31715		
60108677006	DR-6	SM 2540D	WET/31715		
60108677007	DR-7	SM 2540D	WET/31715		
60108677008	DR-8	SM 2540D	WET/31715		
60108677009	DR-4-SW	SM 2540D	WET/31715		
60108677010	DR-G	SM 2540D	WET/31715		
60108677011	FB	SM 2540D	WET/31715		
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60108677016	GW-4	SM 2540D	WET/31745		
60108677017	GW-5	SM 2540D	WET/31745		
60108677018	GW-7	SM 2540D	WET/31745		
60108677019	EB-1	SM 2540D	WET/31745		
60108677020	EB-2	SM 2540D	WET/31745		
60108677021	POND-18	SM 2540D	WET/31745		
60108677020	EB-2	SM 4500-H+B	WET/31668		

Date: 11/15/2011 05:22 PM

REPORT OF LABORATORY ANALYSIS

Page 106 of 107

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without the written consent of Pace Analytical Services, Inc..

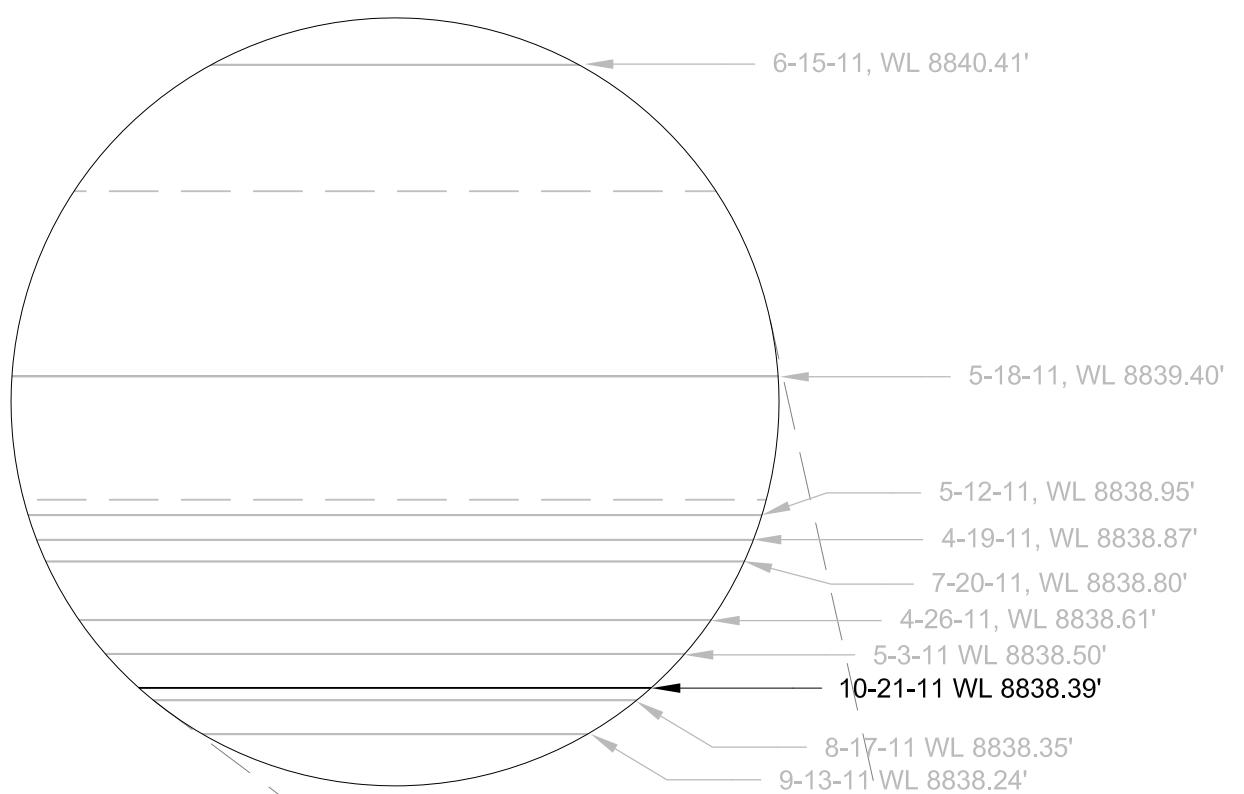
QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: RICO WATER SAMPLING
Pace Project No.: 60108677

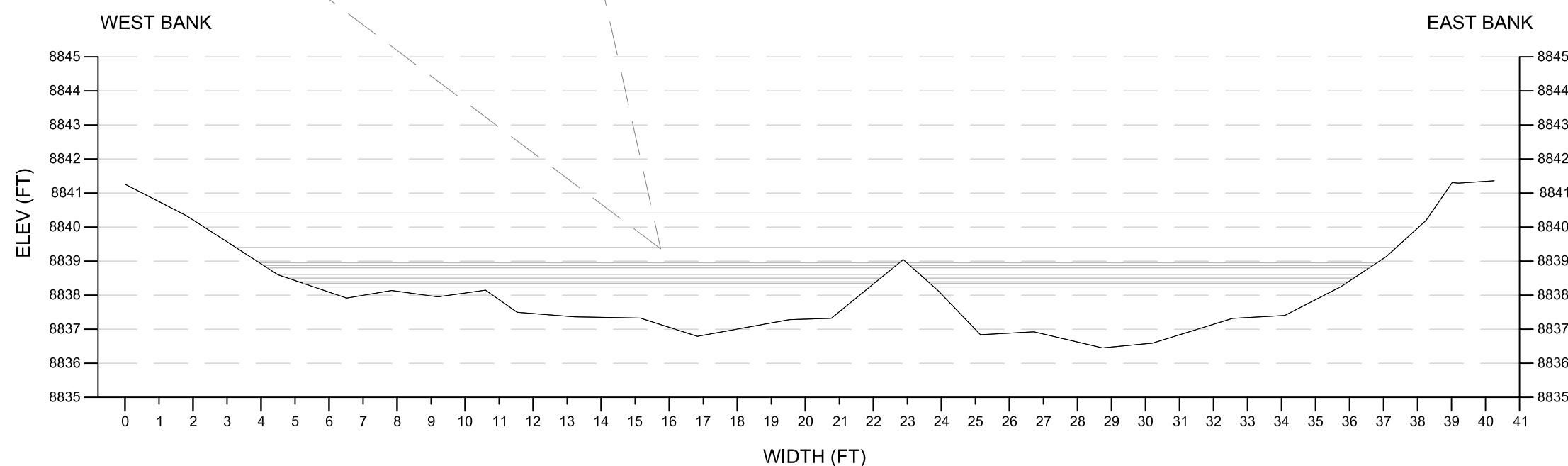
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60108677003	DR-3	EPA 300.0	WETA/18092		
60108677004	DR-4	EPA 300.0	WETA/18092		
60108677005	DR-5	EPA 300.0	WETA/18092		
60108677006	DR-6	EPA 300.0	WETA/18092		
60108677007	DR-7	EPA 300.0	WETA/18092		
60108677008	DR-8	EPA 300.0	WETA/18102		
60108677009	DR-4-SW	EPA 300.0	WETA/18102		
60108677010	DR-G	EPA 300.0	WETA/18102		
60108677011	FB	EPA 300.0	WETA/18102		
60108677012	HT	EPA 300.0	WETA/18102		
60108677014	GW-1	EPA 300.0	WETA/18102		
60108677015	GW-3	EPA 300.0	WETA/18102		
60108677016	GW-4	EPA 300.0	WETA/18102		
60108677017	GW-5	EPA 300.0	WETA/18102		
60108677018	GW-7	EPA 300.0	WETA/18102		
60108677019	EB-1	EPA 300.0	WETA/18102		
60108677020	EB-2	EPA 300.0	WETA/18102		
60108677021	POND-18	EPA 300.0	WETA/18102		
60108677001	DR-1	SM 4500-CN-E	WETA/18081		
60108677002	DR-2	SM 4500-CN-E	WETA/18081		
60108677003	DR-3	SM 4500-CN-E	WETA/18081		
60108677004	DR-4	SM 4500-CN-E	WETA/18081		
60108677005	DR-5	SM 4500-CN-E	WETA/18081		
60108677006	DR-6	SM 4500-CN-E	WETA/18081		
60108677007	DR-7	SM 4500-CN-E	WETA/18081		
60108677008	DR-8	SM 4500-CN-E	WETA/18081		
60108677009	DR-4-SW	SM 4500-CN-E	WETA/18081		
60108677010	DR-G	SM 4500-CN-E	WETA/18081		
60108677011	FB	SM 4500-CN-E	WETA/18081		
60108677012	HT	SM 4500-CN-E	WETA/18081		
60108677014	GW-1	SM 4500-CN-E	WETA/18081		
60108677015	GW-3	SM 4500-CN-E	WETA/18081		
60108677016	GW-4	SM 4500-CN-E	WETA/18081		
60108677017	GW-5	SM 4500-CN-E	WETA/18081		
60108677018	GW-7	SM 4500-CN-E	WETA/18081		
60108677019	EB-1	SM 4500-CN-E	WETA/18081		
60108677020	EB-2	SM 4500-CN-E	WETA/18081		
60108677021	POND-18	SM 4500-CN-E	WETA/18081		

Appendix E

Flow Cross Sections



DR-1 CROSS SECTION



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SALT LAKE CITY, UTAH, 84119 AND SHALL NOT BE COPIED, REDUCED, OR REPRODUCED WITHOUT THEIR WRITTEN PERMISSION.

General Notes		
Scale in Feet		
0	2	4
No.	Revision/Issue	Date

ATLANTIC RICHFIELD
COMPANY



ANDERSON
ENGINEERING COMPANY, INC.

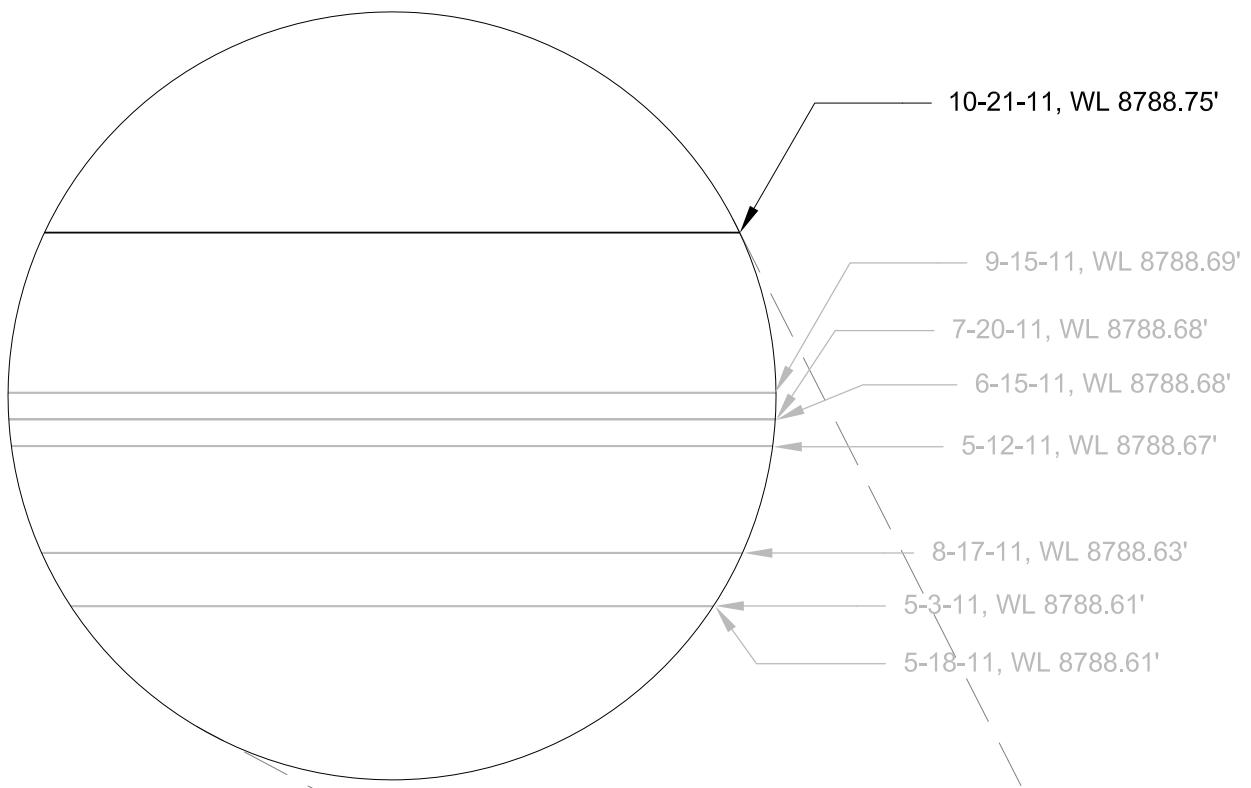
DRAWN BY: MAD
ENGINEER: CS, MAD
APPROVED:

**RICO SURFACE
WATER SAMPLING**
**DOLORES RIVER CROSS
SECTION AT SAMPLING
STATION DR-1**

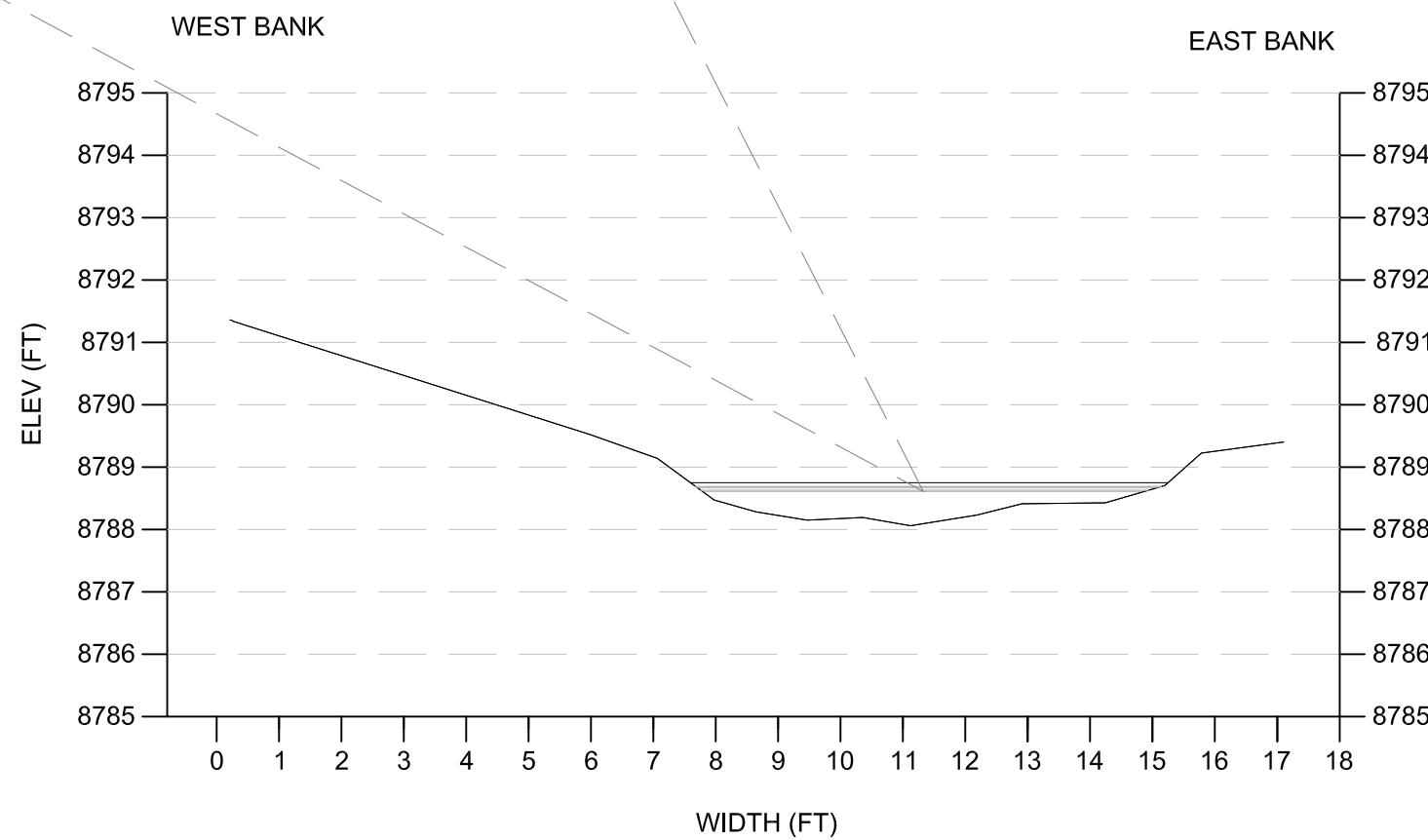
RICO, CO

Project	Figure
Date	21-OCT-2011
Scale	

3



DR-5 CROSS SECTION



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 SALT LAKE CITY, UTAH, 84119 AND SHALL NOT BE COPIED, REDUCED, OR REPRODUCED WITHOUT THEIR WRITTEN PERMISSION.

General Notes		
<i>[Note area]</i>		
Scale in Feet 0 1.5 3		
No.	Revision/Issue	Date

ATLANTIC RICHFIELD
COMPANY



ANDERSON
ENGINEERING COMPANY, INC.

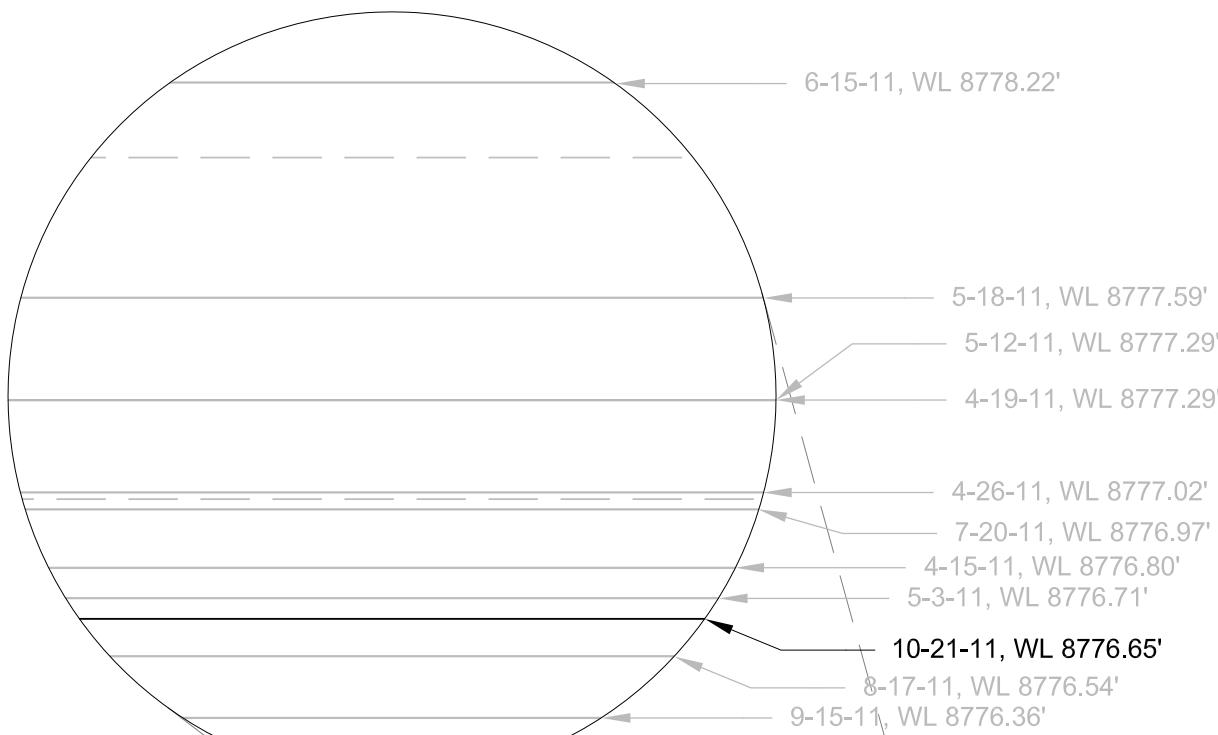
DRAWN BY: MAD
ENGINEER: CS, MAD
APPROVED:

**RICO SURFACE
WATER SAMPLING**

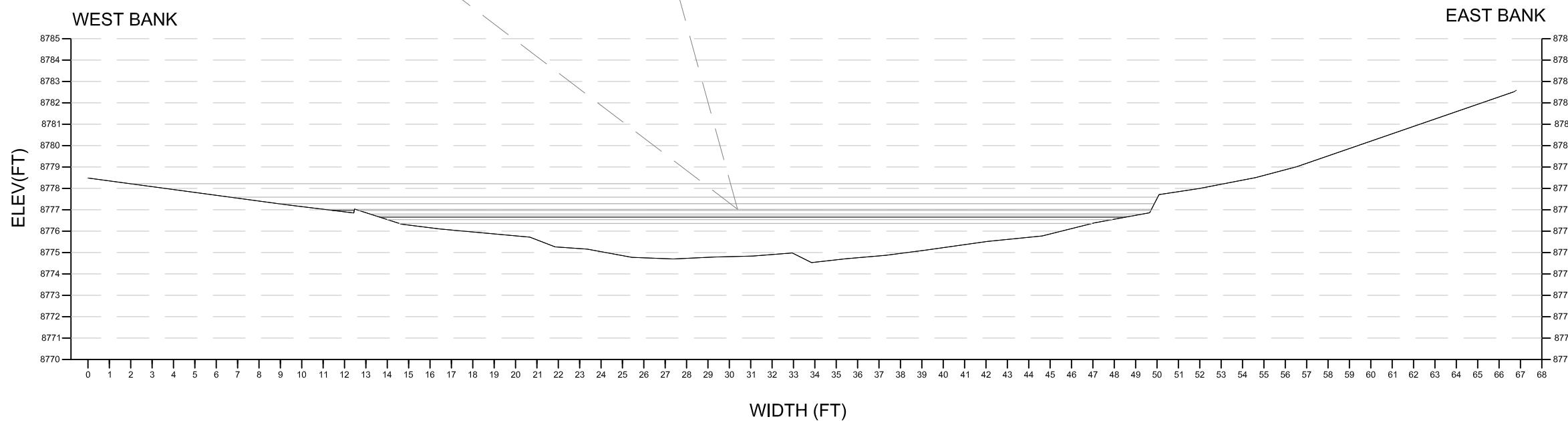
**POND 8 EMBANKMENT
CROSS SECTION AT
SAMPLING STATION DR-5**

RICO, CO

Project	Figure
Date 21-OCT-2011	
Scale	



DR-2 CROSS SECTION



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General Notes		
No.	Revision/Issue	Date

ATLANTIC RICHFIELD
COMPANY



ANDERSON
ENGINEERING COMPANY, INC.

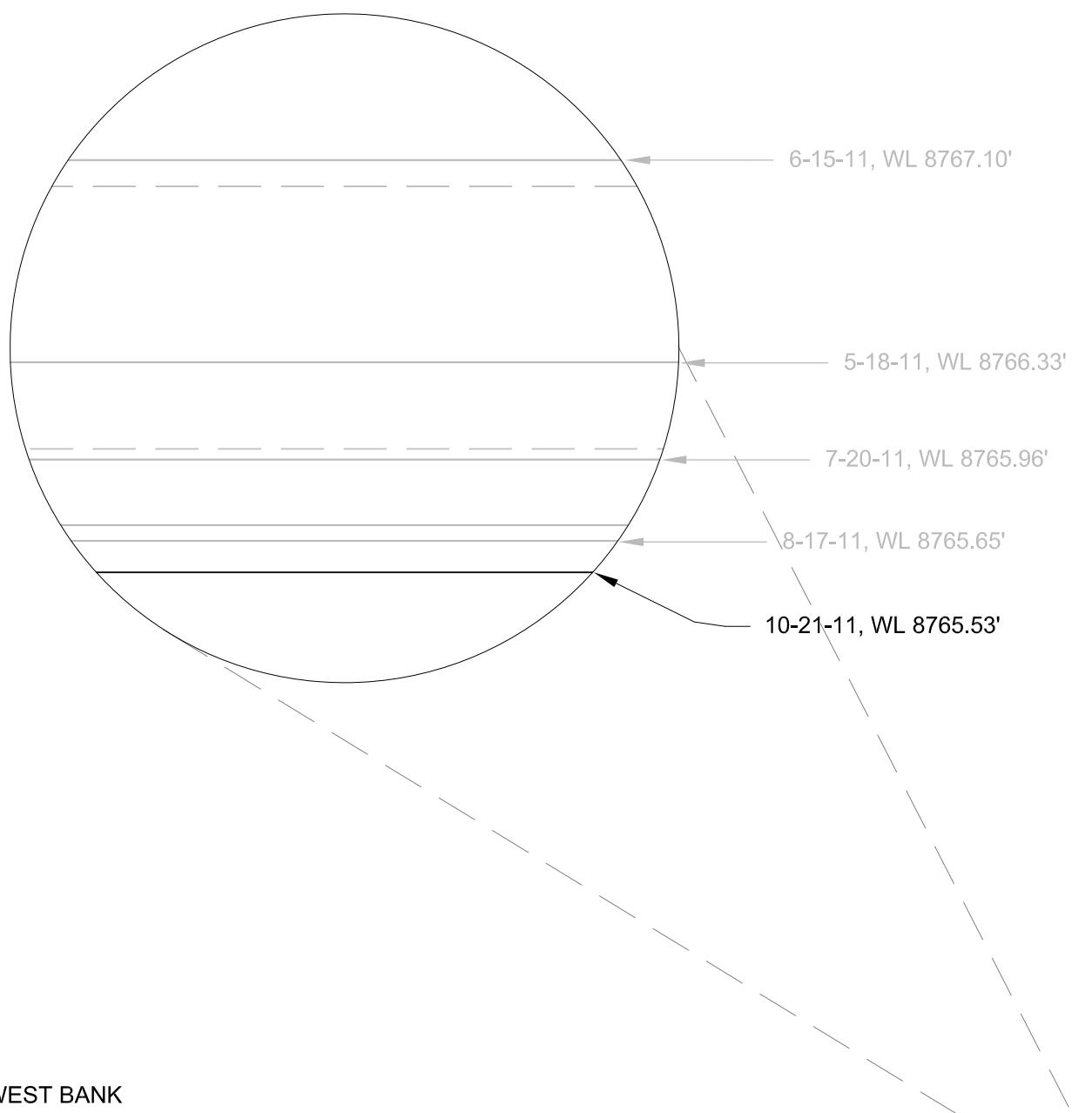
DRAWN BY: MAD
ENGINEER: CS, MAD
APPROVED:

**RICO SURFACE
WATER SAMPLING**

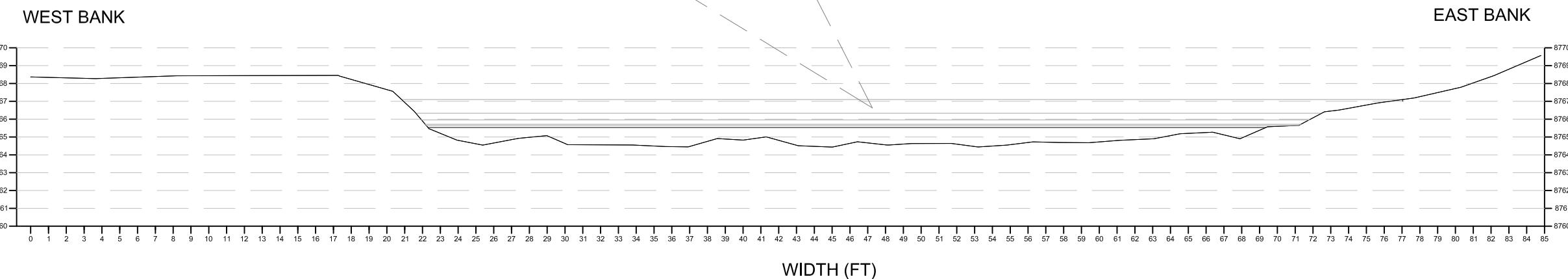
**DOLORES RIVER CROSS
SECTION AT SAMPLING
STATION DR-2**

RICO, CO

Project	Figure
Date 21-OCT-2011	Scale
5	



DR-7 CROSS SECTION



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General Notes

Scale in Feet
0 3.5 7

No.	Revision/Issue	Date
-----	----------------	------

ATLANTIC RICHFIELD
COMPANY



ANDERSON
ENGINEERING COMPANY, INC.

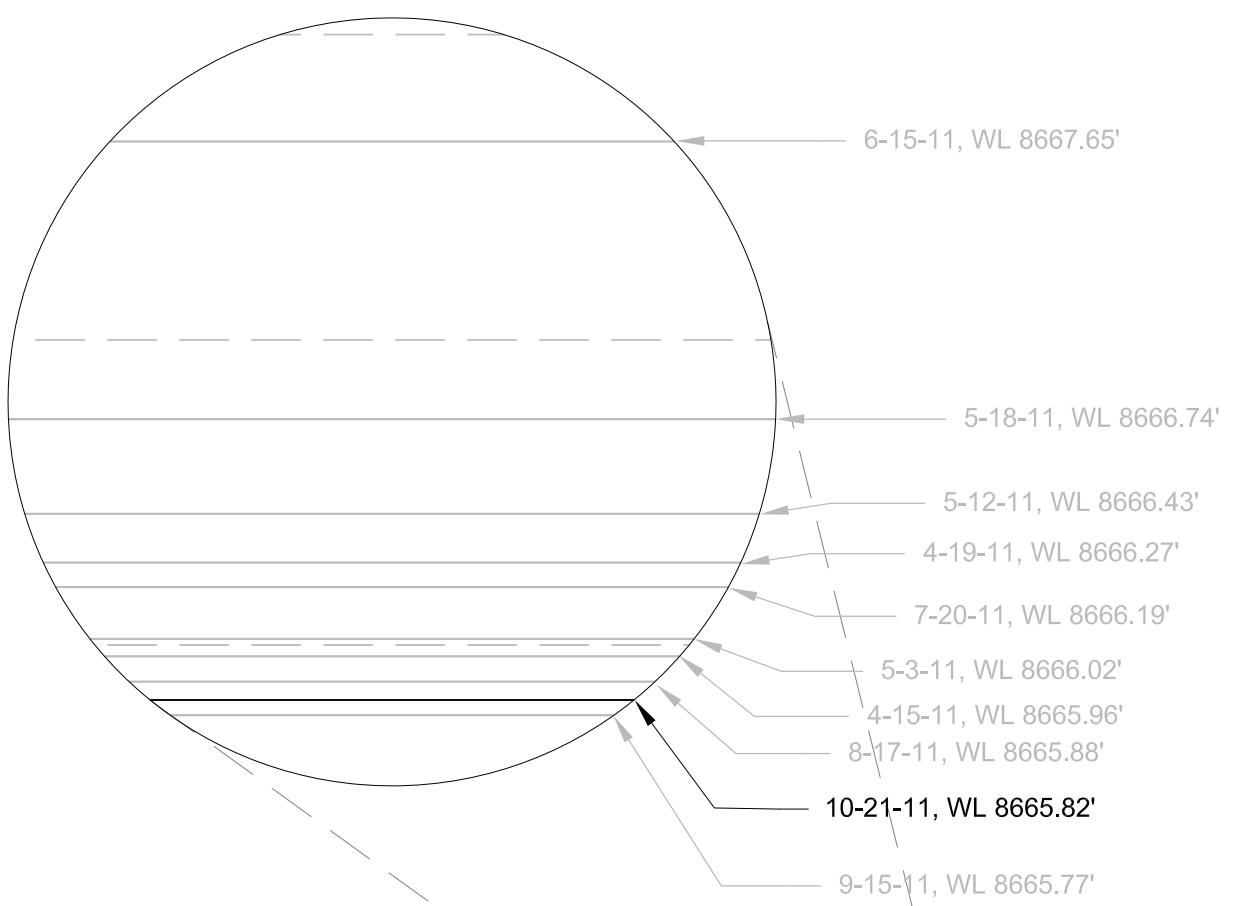
DRAWN BY: MAD
ENGINEER: CS, MAD
APPROVED:

**RICO SURFACE
WATER SAMPLING**

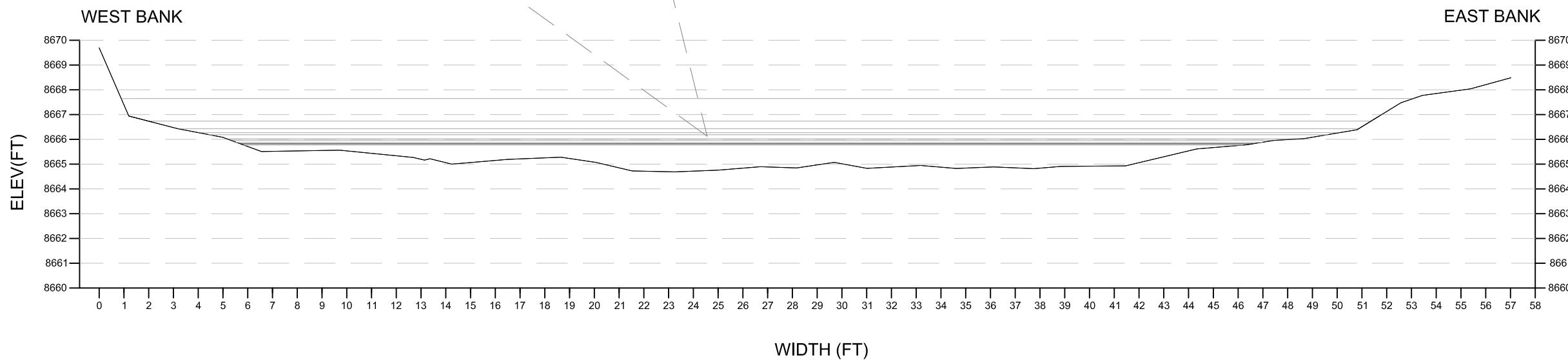
**DOLORES RIVER CROSS
SECTION AT SAMPLING
STATION DR-7**

RICO, CO

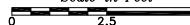
Project:
Date: 21-OCT-2011
Scale:
Figure: 6



DR-4-SW CROSS SECTION



THESE PLANS AND SPECIFICATIONS ARE THE PROPERTY OF ANDERSON ENGINEERING COMPANY, INC., 977 WEST 2100 SOUTH, SALT LAKE CITY, UTAH, 84119 AND SHALL NOT BE COPIED, REDUCED, OR REPRODUCED WITHOUT THEIR WRITTEN PERMISSION.

General Notes			
<i>Scale in Feet</i> 			
No.	Revision/Issue	Date	

ATLANTIC RICHFIELD
COMPANY



ANDERSON
ENGINEERING COMPANY, INC.

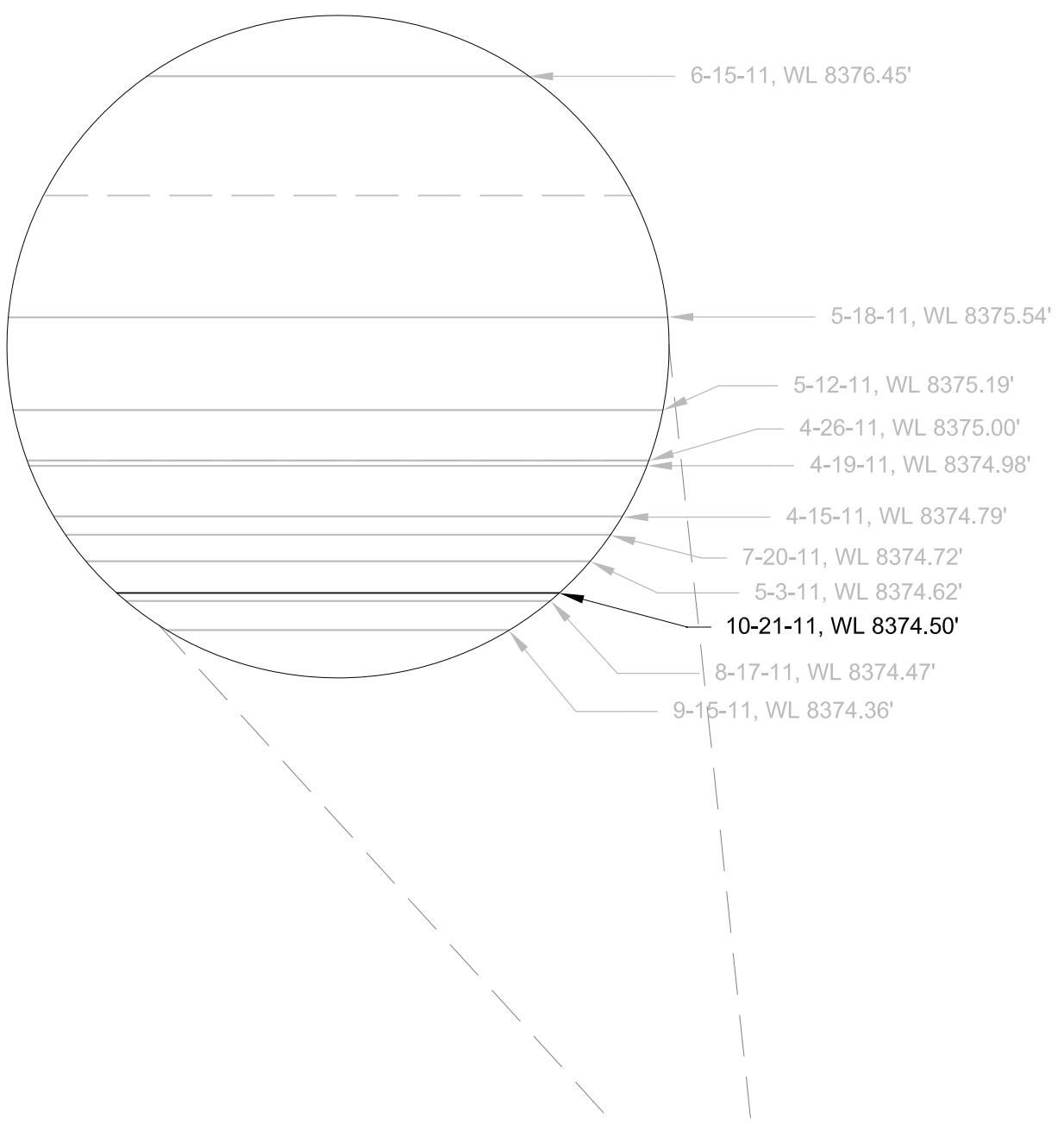
DRAWN BY: MAD
ENGINEER: CS, MAD
APPROVED:

RICO SURFACE WATER SAMPLING

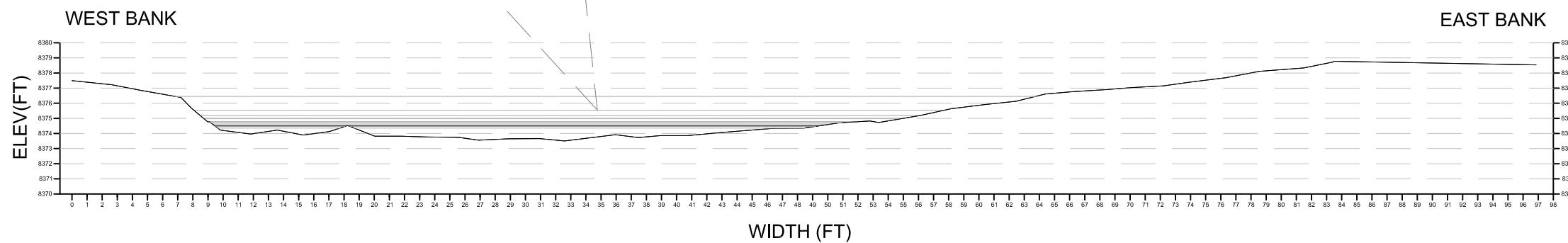
**DOLORES RIVER CROSS
SECTION AT SAMPLING
STATION DR-4-SW**

RICO, CO

Project	Figure
Date	21-OCT-2011
Scale	7



DR-G CROSS SECTION



THESE PLANS AND SPECIFICATIONS ARE THE PROPERTY OF ANDERSON ENGINEERING COMPANY, INC., 977 WEST 2100 SOUTH, SALT LAKE CITY, UTAH, 84119 AND SHALL NOT BE COPIED, REDUCED, OR REPRODUCED WITHOUT THEIR WRITTEN PERMISSION.

General Notes

Scale in Feet

A horizontal scale bar with tick marks at 0, 4.5, and 9. The text "Scale in Feet" is written above the bar.

No.	Revision / Issue	Date

ATLANTIC RICHFIELD
COMPANY



ANDERSON
ENGINEERING COMPANY, INC.

DRAWN BY: MAD
ENGINEER: CS, MAD
APPROVED:

APPROVED:

AFFROVED.

RICO SURFACE WATER SAMPLING

DOLORES RIVER CROSS SECTION AT SAMPLING STATION DR-G

BICO CO

Project	Figure
Date	21-OCT-2011
Scale	

Appendix F
Chain of Custody Records



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a **LEGAL DOCUMENT**. All relevant fields must be completed accurately.

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:		Page: 1 of 4
Company: <i>Anderson Engineering</i>	Report To: <i>Anderson Engineering Co., Inc.</i>	Attention:	1412648			
Address: <i>977 W Z100 S</i>	Copy To:	Company Name:	REGULATORY AGENCY			
<i>Salt Lake City, UT 84119</i>		Address:	<input type="checkbox"/> NPDES	<input type="checkbox"/> GROUND WATER	<input type="checkbox"/> DRINKING WATER	
Email To: <i>mdefree@andersoneng.com</i>	Purchase Order No.:	Pace Quote Reference:	<input type="checkbox"/> UST	<input type="checkbox"/> RCRA	<input type="checkbox"/> OTHER	
Phone: <i>801 234 4583</i>	Fax: <i></i>	Pace Project Manager:	Site Location			
Requested Due Date/TAT: <i>11/3/11</i>	Project Name: <i>Rice Water Sampling</i>	Pace Profile #: <i>D2228</i>	STATE:		<i>CO</i>	
Project Number: <i></i>						

ITEM #	Section D Required Client Information	Matrix Codes MATRIX / CODE		MATRIX CODE (see valid codes to left) SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED				SAMPLE TEMP AT COLLECTION	Preservatives							Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.							
					COMPOSITE START		COMPOSITE END/GRAB																		
		Date	Time		Date	Time	H ₂ SO ₄	HNO ₃		HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other	# OF CONTAINERS										
1	DR-1	WT G	1BP3U,1BP3U,1BP3N,1BP3F	1BP3C	12	10/20								X	X	X	X	5	Unpreserved	Y	N	Total Metals/Hard.	Y	60108677	a7
2	DR-2	WT G												X	X	X	X	5	X	Dissolved Metals	Y				a8
3	DR-3	WT G												X	X	X	X	5	X	Alk/TO/TS/Sulf.	Y				a9
4	DR-4	WT G												X	X	X	X	5	X	Salinity	Y				a10
5	DR-5	WT G												X	X	X	X	5	X	Cyanide	Y				a11
6	DR-6	WT G												X	X	X	X	5	X		Y				a12
7																									
8																									
9																									
10																									
11																									
12																									
ADDITIONAL COMMENTS			RELINQUISHED BY / AFFILIATION			DATE		TIME		ACCEPTED BY / AFFILIATION			DATE		TIME		SAMPLE CONDITIONS								
			ZLD-Z/AECI			10/21/11				E BROCKETT			10/22		0930		10-8	N	N						

***Important Note:** By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Mark DeFrieze

SIGNATURE of SAMPLER: Mark D. S.

**DATE Signed
(MM/DD/YY):** 10/21/11

Temp in °C	
Received on Ice (Y/N)	
Custody Sealed Cooler (Y/N)	
Samples Intact (Y/N)	

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A

Required Client Information:

Company: Anderson Engineering
Address: 977 W 2100 S
City: Salt Lake City, UT 84119
Email To: mdefriez@andersoneng.com
Phone: 801 234 9583 Fax:
Requested Due Date/TAT: 11/17/11

Section B

Required Project Information:

Report To: Anderson Engineering Co., Inc.
Copy To:
Purchase Order No.:
Project Name: Rio Water Sampling
Project Number:

Section C

Invoice Information:

Attention:
Company Name:
Address:
Phone: Fax:
Reference:
Pace Project Manager:
Pace Profile #:

Page:

3 of 4
1412648
REGULATORY AGENCY
 NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER _____

Site Location:
STATE: CO
Requested Analysis - Filtered (Y/N)

ITEM #	Section D Required Client Information	Matrix Codes		SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives						Analysis Test Y/N	Total Metals/Hard	Dissolved Metals	Alk/LD5/LSS/Sulf	Salinity	Cyanide	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.					
		MATRIX / CODE	MATRIX CODE (see valid codes to left)		COMPOSITE START		COMPOSITE END/GRAB				H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ SO ₃	Methanol	Other												
		Drinking Water	DW		DATE	TIME	DATE	TIME			Unpreserved																		
1	GW-1	WT	G	1883F-5	10/21	10:30	10/21	12:00	5	X	X	X					Y	Y	Y					04					
2	GW-3	WT	G		10/21				5	X	X	X						X	X	X					05				
3	GW-4	WT	G		10/21				5	X	X	X						X	X	X					06				
4	GW-5	WT	G		10/21				5	X	X	X						XX	XX	XX					07				
5	GW-7	WT	G	↓	10/21	↓	10/21	↓	5	X	X	X						XX	XX	XX					08				
6		WT	G						5	X	X	X						XXXXXX	XXXXXX	XXXXXX									
7																													
8																													
9																													
10																													
11																													
12																													
ADDITIONAL COMMENTS			RELINQUISHED BY / AFFILIATION			DATE	TIME	ACCEPTED BY / AFFILIATION			DATE	TIME	SAMPLE CONDITIONS																
			<u>210.23/AECI</u>			10/21/11		<u>E Brockett</u>			10/22	8:30	11-2	N	N	Y													
ORIGINAL												SAMPLER NAME AND SIGNATURE																	
PRINT Name of SAMPLER: <u>Mark DeFriez</u>												DATE Signed (MM/DD/YY): <u>10/21/11</u>																	
SIGNATURE of SAMPLER: <u>Mark DeFriez</u>												Samples intact (Y/N)																	
Temp in °C												Received on Ice (Y/N)																	
Custody Sealed Cooler (Y/N)												F-ALL-Q-020rev.07, 15-May-2007																	

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a **LEGAL DOCUMENT**. All relevant fields must be completed accurately.

Section A

Required Client Information:

Company: Anderson Engineering
Address: 977 W Z100 S
City: Salt Lake City, UT 84119
Email To: mdefriese@andersoneng.com
Phone: 801234 9583 Fax:
Requested Due Date/TAT: 11/31/11

Section B

Required Project Information:

Report To: Anderson Engineering Co., Inc.
Copy To:
Purchase Order No.:
Project Name: Rico Water Sampling
Project Number:

Section C

Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #:

Page:

4 of 4

1412648

REGULATORY AGENCY
 NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER _____

Site Location:
STATE: CO
Requested Analysis Filtered (Y/N)

<input checked="" type="checkbox"/>	Total Metals / Hard.
<input checked="" type="checkbox"/>	Dissolved Metals
<input checked="" type="checkbox"/>	Alk./TDS/TSS/Sulf.
<input checked="" type="checkbox"/>	Salinity
<input checked="" type="checkbox"/>	Cyanide
<input checked="" type="checkbox"/>	pH

Residual Chlorine (Y/N)

60108677

Pace Project No./ Lab I.D.

G9
020
025

ITEM #	SAMPLE ID (A-Z, 0-9 / -) Sample IDs MUST BE UNIQUE	Matrix Codes MATRIX / CODE		MATRIX CODE (see valid codes to left)	COLLECTED		SAMPLE TEMP AT COLLECTION	Preservatives						# OF CONTAINERS	Analysis Test	Y/N		
					COMPOSITE START			COMPOSITE END/GRAB										
		SAMPLE TYPE (G=GRAB C=COMP)			DATE	TIME		DATE	TIME	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other		
1	EB-1 1B3C1, 1B2L1	WT G	BP36	WT G	10/21	07:35:15		5	X	X	X	X	X				X X X X X X	X X X X X X
2	EB-2	WT G		WT G	10/21			5	X	X	X	X					X X X X X X	X X X X X X
3	Pond 18 ↓ ↓	WT G		WT G	10/21			5	X	X	X						X X X X X X	X X X X X X
4		WT G		WT G				5	X	X	X						X X X X X X	X X X X X X
5		WT G		WT G				5	X	X	X						X X X X X X	X X X X X X
6		WT G		WT G				5	X	X	X						X X X X X X	X X X X X X
7																		
8																		
9																		
10																		
11																		
12																		
ADDITIONAL COMMENTS			RELINQUISHED BY / AFFILIATION			DATE	TIME	ACCEPTED BY / AFFILIATION			DATE	TIME	SAMPLE CONDITIONS					
pH test on EB-2 only			Lk D.Z / AECI			10/21/11		F Brockett			10/22	08:30	10.4	N	N	Y		
															</td			



Sample Condition Upon Receipt

BP
Client Name: Anderson Engineering Project # 60108677

Courier: <input type="checkbox"/> FedEx <input type="checkbox"/> UPS <input type="checkbox"/> USPS <input type="checkbox"/> Client <input type="checkbox"/> Commercial <input type="checkbox"/> Pace <input type="checkbox"/> Other Tracking #: <u>875849340623</u> <u>0634</u> Pace Shipping Label Used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No						Optional Proj. Due Date: <u>11/07</u> Proj. Name: <u>BP</u>	
Custody Seal on Cooler/Box Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Seals intact: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No							
Packing Material: <input type="checkbox"/> Bubble Wrap <input type="checkbox"/> Bubble Bags <input type="checkbox"/> Foam <input type="checkbox"/> None <input type="checkbox"/> Other <u>2plc</u>							
Thermometer Used: <u>T-191 / T-194</u> Type of Ice: Wet Blue None						<input type="checkbox"/> Samples on ice, cooling process has begun	
Cooler Temperature: <u>10.8, 10.4, 11.2, 9.8</u> Temperature should be above freezing to 6°C						Comments: <u>Date and Initials of person examining contents: 10/22/11</u>	
Chain of Custody present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A 1. Chain of Custody filled out: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A 2. <u>No times on containers or COC</u> Chain of Custody relinquished: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A 3. Sampler name & signature on COC: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A 4. <u>Temp > 6°C!</u> Samples arrived within holding time: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A 5. Short Hold Time analyses (<72hr): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A 6. <u>ph</u> Rush Turn Around Time requested: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A 7. Sufficient volume: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A 8. Correct containers used: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A 9. -Pace containers used: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A Containers intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A 10. Unpreserved 5035A soils frozen w/in 48hrs?: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A 11. Filtered volume received for dissolved tests: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A 12. Sample labels match COC: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A 13. -Includes date/time/ID/analyses Matrix: <u>WT</u> All containers needing preservation have been checked: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A 14. All containers needing preservation are found to be in compliance with EPA recommendation: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Initial when completed _____ Lot # of added preservative _____ Trip Blank present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A 15. Pace Trip Blank lot # (if purchased): _____ Headspace in VOA vials (>6mm): <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A 16. Project sampled in USDA Regulated Area: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A 17. List State: <u>NC</u>							

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution:

10/24 - per Mark DeFrize proceed w/analyses. This is a BP project.
Split sample GW-AT-2 into water & soil & analyze for
total metals only.

Project Manager Review: AAC

Date: 10/25/11

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

Appendix G

Field Photos

October 2011 Field Photos



Cross Section at Station DR-1



Cross Section at Station DR-5

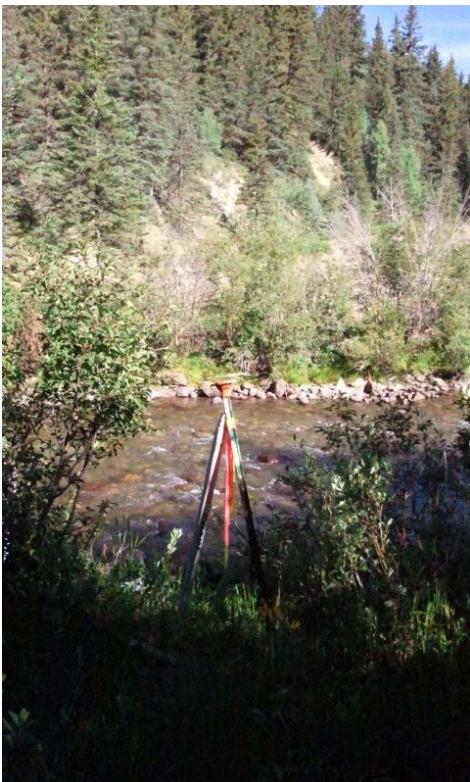


Cross Section at Station DR-2

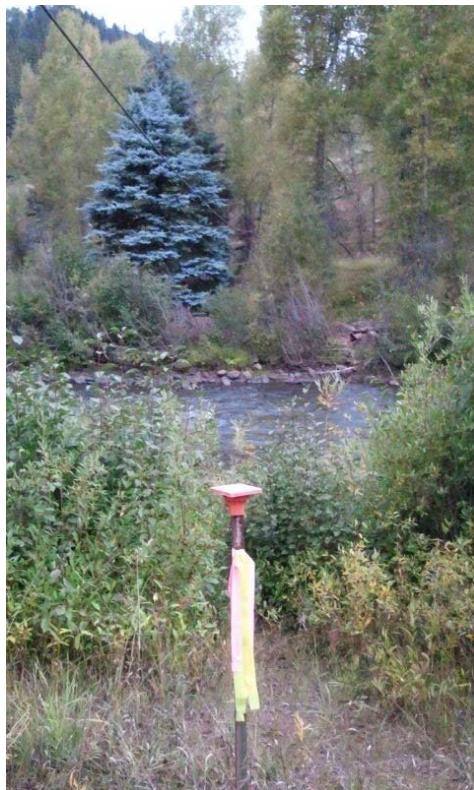


Cross Section at Station DR-7

October 2011 Field Photos



Cross Section at Station DR-4-SW



Cross Section at Station DR-G

Appendix H
Field Log Book Records

Sampling

DR-3 / DR-8

Sample collected on 10/20/11
at 9:30 am

Field tests:

pH 7.4 T 61.8°F
DO 0.98 ppm EC 1129 μS

10/21/11

Velocities:

NA

BM EL flow measured by
WL EL installed parshall flume
and ultrasonic water
level meter

10/20/11

DR-1

Sample Collected: 10:15 am

Field tests:

pH 8.61 T 24°C
DO 2.30 ppm EC 390 μS

10/21/11 East → West

Velocities: 0.5, 2.8, 3.3, 3.8, 2.8, 2.2
2.4, 2.4, 1.8, 1.4, 2.8, 2.2, 1.8, 0.4, 0.2, 0.2

BM EL ~~5.44~~ 5.37
WL EL 8.34

10/20/11

DR-4 - Pond 18 discharge
collected at: 10:40 am

Field tests:

pH F: 8.4 T 11.7°C
DO 1.38 ppm EC 1241 mS

10/21/11

Velocities:

upper pipe:

lower pipe:

Diameter of each pipe: 15"

Depth of flow:

upper pipe:

lower pipe:

10/20/11

Pond 18 sample
collected at: 11:08 am

Field tests:

pH ^{NO} 8.28 ^{8.32} T ^{NO} 13.6°C
DO 1.20 ppm EC 1270 mS

10/20/11

DR-5 - Pond 8 discharge
collected at: 11:43 am

Field Tests:

pH 8.28 T 12.1°C
DO 1.38 ppm EC 1120 μS

10/ 11

Velocities: 5.29 sec / 3 ft.

BM EL 5.28
WL EL 7.89

photo # 4

10/20/11

DR-2 - Dolores River upstream of
outfall

collected at: 11:50 am

Field tests:

pH 8.05 T 6.3°C
DO 1.90 ppm EC 349 μS

10/21/11

Velocities: 0.2, 0.4, 0.8, 0.5, 0.6, 1.1,
1.0, 1.5, 1.3, 0.9, 1.5, 1.3, 1.7, 1.1, 1.5, 1.1,
1.1, 0.8, 0.4, 0.2

BM EL 4.94
WL EL 10.88

photo # 3

10/20/11

HT - Sample at Hot Tub near
St. Louis outfall
collected at 11:20 am

Field tests

pH 6.95 T 31.2°C
DO 0.55 ppm EC 3.13 mS

||||| / / / / / / / / / / / / / /

10/20/11

FB - Field Blank

collected at 12:13 pm

pH 7.09 T 15.9°C
DO 1.11 ppm EC 30.5 μS

10/20/11

collected at
DR-6 12:25 pm
↳ St Louis System outfall

Field tests

pH 7.09 T 7.9°C
DO 1.81 ppm EC 12.02 μS

Flow by installed parshall
flume and pressure
transducer

10/20/11

DR-7 - Below (downstream)
at four outfall
collected at 12:45am

Field tests

pH 7.95 T 7.4°C
DO 1.86 ppm EC 403 μS

|||||||

10/21/11

Velocities: 0.4, 0.8, 0.6, 1.0, 2.2, 2.8,
2.4, 1.8, 2.2, 1.5, 1.6, 1.6, 1.7, 1.4, 1.9, 1.5,
2.0, 1.2, 1.0, 1.0, 0.8, 1.6, 0.8, 1.3, 0.9, 0.3,
0.4, 0.2.

BM EL 6.87
WL EL 10.91

photo #2

10/21/11

DR-4-SW - Below Silver Swan
collected at 11:00 am
pH ~~7.49~~ 7.49 T 5.4°C
DO 2.16 ppm EC 345 μS

10/21/11 West-E East-West

velocities: 1.3, 1.2, 1.6, 1.9, 2.0,
2.8, 1.7, 1.3, 1.4, 1.6, 2.0, 3.5, 1.2,
2.9, 2.5, 1.8, 2.1, 2.2, 1.2, 3.2, 1.1,
1.4, 0.8

BM EL 5.44
WL EL 8.11

10/21/11

DR-G At USGS Gaging
Station

Collected at 11:30 am

Field tests:

pH 7.80

T 7.7°C

D0 1.91 ppm

EC 320 uS

10/21/11

Velocities: 0.9, 0.4, 1.2, 1.8, 1.8, 1.1,
0.5, 1.5, 2.1, 1.3, 1.1, 1.0, 2.4, 2.1,
1.5, 1.9, 1.8, 0.8, 1.2, 1.2, 0.4

BM EL 4.54
WL EL 8.58

10/21/11

DR-1A

Velocities: 1.8, 2.4, 1.3, 2.3, 1.0, 2.4, 1.8,
2.4, 1.0, 0.8, 1.0, 0.8, 1.6, 0.5, 1.3, 0.8, 2.4, 2.7,
1.4, 1.6, 1.7, 0.8

BM EL 4.36 WL EL 6.80

1 1 1 1 1 1 7 2 7 2 2 2

DR-2A photo #1

Velocities: 1.3, 1.1, 0.9, 1.1, 0.9, 0.2, 1.8,
0.8, 1.4, 1.4, 1.5, 2.5, 2.4, 1.1, 2.9, 1.6, 3, 1.3, 2, 2.9, 2.7,
1.7, 1.5, 1.6, 0.6, 0.8, 0.7

BM EL 4.51 WL EL 1 10.67

BM EL 4.51 WL EL 2 10.09

1 1 1 1 1 1 1 2 2 2 2

DR-3A

Velocities: 0.6, 0.7, 1.0, 1.2, 1.6,
2.0, 1.0, 1.9, 2.4, 1.5, 2.3, 1.0, 1.9,
1.9, 2.8, 2.3, 2.7, 1.9, 1.4, 1.1, 1.4, 1.8,
1.2, 0.5, 1.0

BM EL 4.55 WL EL 9.31

Appendix I

North Flume Ultrasonic Meter Data with Flowrates

Date, Time	Reading	Parameter	Depth to water (ft)	Depth from sensor to Bottom of Flume (ft)	Depth of Flow (ft)	Depth of Flow (in)	Flowrate (cfs)	Flowrate (gpm)
10/1/2011 0:00	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/1/2011 0:15	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/1/2011 0:30	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/1/2011 0:45	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/1/2011 1:00	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/1/2011 1:15	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/1/2011 1:30	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/1/2011 1:45	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/1/2011 2:00	8.69	Level	1.31	2.073	0.763	9.155	2.04	914.7
10/1/2011 2:15	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/1/2011 2:30	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/1/2011 2:45	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/1/2011 3:00	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/1/2011 3:15	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/1/2011 3:30	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/1/2011 3:45	8.6	Level	1.4	2.073	0.673	8.075	1.69	756.7
10/1/2011 4:00	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/1/2011 4:15	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/1/2011 4:30	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/1/2011 4:45	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/1/2011 5:00	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/1/2011 5:15	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/1/2011 5:30	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/1/2011 5:45	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/1/2011 6:00	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/1/2011 6:15	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/1/2011 6:30	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/1/2011 6:45	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/1/2011 7:00	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/1/2011 7:15	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/1/2011 7:30	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/1/2011 7:45	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/1/2011 8:00	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/1/2011 8:15	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/1/2011 8:30	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/1/2011 8:45	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/1/2011 9:00	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/1/2011 9:15	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/1/2011 9:30	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/1/2011 9:45	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/1/2011 10:00	8.69	Level	1.31	2.073	0.763	9.155	2.04	914.7
10/1/2011 10:15	8.69	Level	1.31	2.073	0.763	9.155	2.04	914.7
10/1/2011 10:30	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/1/2011 10:45	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/1/2011 11:00	8.69	Level	1.31	2.073	0.763	9.155	2.04	914.7

Date	Time	Parameter	Value	Min	Max	Avg	Total	
10/1/2011	11:15	8.69 Level	1.31	2.073	0.763	9.155	2.04	914.7
10/1/2011	11:30	8.68 Level	1.32	2.073	0.753	9.035	2.00	896.7
10/1/2011	11:45	8.68 Level	1.32	2.073	0.753	9.035	2.00	896.7
10/1/2011	12:00	8.68 Level	1.32	2.073	0.753	9.035	2.00	896.7
10/1/2011	12:15	8.68 Level	1.32	2.073	0.753	9.035	2.00	896.7
10/1/2011	12:30	8.69 Level	1.31	2.073	0.763	9.155	2.04	914.7
10/1/2011	12:45	8.68 Level	1.32	2.073	0.753	9.035	2.00	896.7
10/1/2011	13:00	8.69 Level	1.31	2.073	0.763	9.155	2.04	914.7
10/1/2011	13:15	8.69 Level	1.31	2.073	0.763	9.155	2.04	914.7
10/1/2011	13:30	8.69 Level	1.31	2.073	0.763	9.155	2.04	914.7
10/1/2011	13:45	8.69 Level	1.31	2.073	0.763	9.155	2.04	914.7
10/1/2011	14:00	8.69 Level	1.31	2.073	0.763	9.155	2.04	914.7
10/1/2011	14:15	8.69 Level	1.31	2.073	0.763	9.155	2.04	914.7
10/1/2011	14:30	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/1/2011	14:45	8.69 Level	1.31	2.073	0.763	9.155	2.04	914.7
10/1/2011	15:00	8.69 Level	1.31	2.073	0.763	9.155	2.04	914.7
10/1/2011	15:15	8.69 Level	1.31	2.073	0.763	9.155	2.04	914.7
10/1/2011	15:30	8.69 Level	1.31	2.073	0.763	9.155	2.04	914.7
10/1/2011	15:45	8.69 Level	1.31	2.073	0.763	9.155	2.04	914.7
10/1/2011	16:00	8.69 Level	1.31	2.073	0.763	9.155	2.04	914.7
10/1/2011	16:15	8.69 Level	1.31	2.073	0.763	9.155	2.04	914.7
10/1/2011	16:30	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/1/2011	16:45	8.69 Level	1.31	2.073	0.763	9.155	2.04	914.7
10/1/2011	17:00	8.69 Level	1.31	2.073	0.763	9.155	2.04	914.7
10/1/2011	17:15	8.69 Level	1.31	2.073	0.763	9.155	2.04	914.7
10/1/2011	17:30	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/1/2011	17:45	8.69 Level	1.31	2.073	0.763	9.155	2.04	914.7
10/1/2011	18:00	8.69 Level	1.31	2.073	0.763	9.155	2.04	914.7
10/1/2011	18:15	8.69 Level	1.31	2.073	0.763	9.155	2.04	914.7
10/1/2011	18:30	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/1/2011	18:45	8.69 Level	1.31	2.073	0.763	9.155	2.04	914.7
10/1/2011	19:00	8.69 Level	1.31	2.073	0.763	9.155	2.04	914.7
10/1/2011	19:15	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/1/2011	19:30	8.69 Level	1.31	2.073	0.763	9.155	2.04	914.7
10/1/2011	19:45	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/1/2011	20:00	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/1/2011	20:15	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/1/2011	20:30	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/1/2011	20:45	8.69 Level	1.31	2.073	0.763	9.155	2.04	914.7
10/1/2011	21:00	8.69 Level	1.31	2.073	0.763	9.155	2.04	914.7
10/1/2011	21:15	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/1/2011	21:30	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/1/2011	21:45	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/1/2011	22:00	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/1/2011	22:15	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/1/2011	22:30	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/1/2011	22:45	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3

10/1/2011 23:00	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/1/2011 23:15	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/1/2011 23:30	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/1/2011 23:45	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/2/2011 0:00	8.69	Level	1.31	2.073	0.763	9.155	2.04	914.7
10/2/2011 0:15	8.6	Level	1.4	2.073	0.673	8.075	1.69	756.7
10/2/2011 0:30	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/2/2011 0:45	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/2/2011 1:00	8.6	Level	1.4	2.073	0.673	8.075	1.69	756.7
10/2/2011 1:15	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/2/2011 1:30	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/2/2011 1:45	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/2/2011 2:00	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/2/2011 2:15	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/2/2011 2:30	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/2/2011 2:45	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/2/2011 3:00	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/2/2011 3:15	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/2/2011 3:30	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/2/2011 3:45	8.6	Level	1.4	2.073	0.673	8.075	1.69	756.7
10/2/2011 4:00	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/2/2011 4:15	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/2/2011 4:30	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/2/2011 4:45	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/2/2011 5:00	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/2/2011 5:15	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/2/2011 5:30	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/2/2011 5:45	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/2/2011 6:00	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/2/2011 6:15	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/2/2011 6:30	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/2/2011 6:45	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/2/2011 7:00	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/2/2011 7:15	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/2/2011 7:30	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/2/2011 7:45	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/2/2011 8:00	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/2/2011 8:15	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/2/2011 8:30	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/2/2011 8:45	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/2/2011 9:00	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/2/2011 9:15	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/2/2011 9:30	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/2/2011 9:45	8.69	Level	1.31	2.073	0.763	9.155	2.04	914.7
10/2/2011 10:00	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/2/2011 10:15	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/2/2011 10:30	8.69	Level	1.31	2.073	0.763	9.155	2.04	914.7

10/2/2011 10:45	8.69	Level	1.31	2.073	0.763	9.155	2.04	914.7
10/2/2011 11:00	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/2/2011 11:15	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/2/2011 11:30	8.69	Level	1.31	2.073	0.763	9.155	2.04	914.7
10/2/2011 11:45	8.69	Level	1.31	2.073	0.763	9.155	2.04	914.7
10/2/2011 12:00	8.68	Level	1.32	2.073	0.753	9.035	2.00	896.7
10/2/2011 12:15	8.69	Level	1.31	2.073	0.763	9.155	2.04	914.7
10/2/2011 12:30	8.68	Level	1.32	2.073	0.753	9.035	2.00	896.7
10/2/2011 12:45	8.69	Level	1.31	2.073	0.763	9.155	2.04	914.7
10/2/2011 13:00	8.69	Level	1.31	2.073	0.763	9.155	2.04	914.7
10/2/2011 13:15	8.69	Level	1.31	2.073	0.763	9.155	2.04	914.7
10/2/2011 13:30	8.69	Level	1.31	2.073	0.763	9.155	2.04	914.7
10/2/2011 13:45	8.69	Level	1.31	2.073	0.763	9.155	2.04	914.7
10/2/2011 14:00	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/2/2011 14:15	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/2/2011 14:30	8.69	Level	1.31	2.073	0.763	9.155	2.04	914.7
10/2/2011 14:45	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/2/2011 15:00	8.69	Level	1.31	2.073	0.763	9.155	2.04	914.7
10/2/2011 15:15	8.69	Level	1.31	2.073	0.763	9.155	2.04	914.7
10/2/2011 15:30	8.69	Level	1.31	2.073	0.763	9.155	2.04	914.7
10/2/2011 15:45	8.69	Level	1.31	2.073	0.763	9.155	2.04	914.7
10/2/2011 16:00	8.73	Level	1.27	2.073	0.803	9.635	2.20	988.2
10/2/2011 16:15	8.69	Level	1.31	2.073	0.763	9.155	2.04	914.7
10/2/2011 16:30	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/2/2011 16:45	8.69	Level	1.31	2.073	0.763	9.155	2.04	914.7
10/2/2011 17:00	8.69	Level	1.31	2.073	0.763	9.155	2.04	914.7
10/2/2011 17:15	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/2/2011 17:30	8.69	Level	1.31	2.073	0.763	9.155	2.04	914.7
10/2/2011 17:45	8.69	Level	1.31	2.073	0.763	9.155	2.04	914.7
10/2/2011 18:00	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/2/2011 18:15	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/2/2011 18:30	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/2/2011 18:45	8.69	Level	1.31	2.073	0.763	9.155	2.04	914.7
10/2/2011 19:00	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/2/2011 19:15	8.69	Level	1.31	2.073	0.763	9.155	2.04	914.7
10/2/2011 19:30	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/2/2011 19:45	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/2/2011 20:00	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/2/2011 20:15	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/2/2011 20:30	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/2/2011 20:45	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/2/2011 21:00	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/2/2011 21:15	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/2/2011 21:30	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/2/2011 21:45	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/2/2011 22:00	8.69	Level	1.31	2.073	0.763	9.155	2.04	914.7
10/2/2011 22:15	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3

10/2/2011 22:30	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/2/2011 22:45	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/2/2011 23:00	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/2/2011 23:15	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/2/2011 23:30	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/2/2011 23:45	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/3/2011 0:00	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/3/2011 0:15	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/3/2011 0:30	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/3/2011 0:45	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/3/2011 1:00	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/3/2011 1:15	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/3/2011 1:30	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/3/2011 1:45	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/3/2011 2:00	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/3/2011 2:15	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/3/2011 2:30	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/3/2011 2:45	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/3/2011 3:00	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/3/2011 3:15	8.6	Level	1.4	2.073	0.673	8.075	1.69	756.7
10/3/2011 3:30	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/3/2011 3:45	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/3/2011 4:00	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/3/2011 4:15	8.6	Level	1.4	2.073	0.673	8.075	1.69	756.7
10/3/2011 4:30	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/3/2011 4:45	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/3/2011 5:00	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/3/2011 5:15	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/3/2011 5:30	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/3/2011 5:45	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/3/2011 6:00	8.6	Level	1.4	2.073	0.673	8.075	1.69	756.7
10/3/2011 6:15	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/3/2011 6:30	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/3/2011 6:45	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/3/2011 7:00	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/3/2011 7:15	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/3/2011 7:30	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/3/2011 7:45	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/3/2011 8:00	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/3/2011 8:15	8.69	Level	1.31	2.073	0.763	9.155	2.04	914.7
10/3/2011 8:30	8.69	Level	1.31	2.073	0.763	9.155	2.04	914.7
10/3/2011 8:45	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/3/2011 9:00	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/3/2011 9:15	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/3/2011 9:30	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/3/2011 9:45	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/3/2011 10:00	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7

Date	Time	Parameter	Value	Unit	Value	Unit	Value
10/3/2011	10:15	8.69	Level	1.31	2.073	0.763	9.155
10/3/2011	10:30	8.64	Level	1.36	2.073	0.713	8.555
10/3/2011	10:45	8.69	Level	1.31	2.073	0.763	9.155
10/3/2011	11:00	8.69	Level	1.31	2.073	0.763	9.155
10/3/2011	11:15	8.69	Level	1.31	2.073	0.763	9.155
10/3/2011	11:30	8.69	Level	1.31	2.073	0.763	9.155
10/3/2011	11:45	8.64	Level	1.36	2.073	0.713	8.555
10/3/2011	12:00	8.69	Level	1.31	2.073	0.763	9.155
10/3/2011	12:15	8.69	Level	1.31	2.073	0.763	9.155
10/3/2011	12:30	8.64	Level	1.36	2.073	0.713	8.555
10/3/2011	12:45	8.69	Level	1.31	2.073	0.763	9.155
10/3/2011	13:00	8.69	Level	1.31	2.073	0.763	9.155
10/3/2011	13:15	8.69	Level	1.31	2.073	0.763	9.155
10/3/2011	13:30	8.69	Level	1.31	2.073	0.763	9.155
10/3/2011	13:45	8.69	Level	1.31	2.073	0.763	9.155
10/3/2011	14:00	8.69	Level	1.31	2.073	0.763	9.155
10/3/2011	14:15	8.69	Level	1.31	2.073	0.763	9.155
10/3/2011	14:30	7.2	Level	2.8	2.073	-0.727	-8.725
						#NUM!	#NUM!
10/3/2011	14:45	8.68	Level	1.32	2.073	0.753	9.035
10/3/2011	15:00	8.68	Level	1.32	2.073	0.753	9.035
10/3/2011	15:15	8.69	Level	1.31	2.073	0.763	9.155
10/3/2011	15:30	8.69	Level	1.31	2.073	0.763	9.155
10/3/2011	15:45	8.69	Level	1.31	2.073	0.763	9.155
10/3/2011	16:00	8.69	Level	1.31	2.073	0.763	9.155
10/3/2011	16:15	8.69	Level	1.31	2.073	0.763	9.155
10/3/2011	16:30	8.69	Level	1.31	2.073	0.763	9.155
10/3/2011	16:45	8.64	Level	1.36	2.073	0.713	8.555
10/3/2011	17:00	8.69	Level	1.31	2.073	0.763	9.155
10/3/2011	17:15	8.69	Level	1.31	2.073	0.763	9.155
10/3/2011	17:30	8.69	Level	1.31	2.073	0.763	9.155
10/3/2011	17:45	8.64	Level	1.36	2.073	0.713	8.555
10/3/2011	18:00	8.64	Level	1.36	2.073	0.713	8.555
10/3/2011	18:15	8.64	Level	1.36	2.073	0.713	8.555
10/3/2011	18:30	8.69	Level	1.31	2.073	0.763	9.155
10/3/2011	18:45	8.64	Level	1.36	2.073	0.713	8.555
10/3/2011	19:00	8.69	Level	1.31	2.073	0.763	9.155
10/3/2011	19:15	8.64	Level	1.36	2.073	0.713	8.555
10/3/2011	19:30	8.64	Level	1.36	2.073	0.713	8.555
10/3/2011	19:45	8.64	Level	1.36	2.073	0.713	8.555
10/3/2011	20:00	8.64	Level	1.36	2.073	0.713	8.555
10/3/2011	20:15	8.64	Level	1.36	2.073	0.713	8.555
10/3/2011	20:30	8.64	Level	1.36	2.073	0.713	8.555
10/3/2011	20:45	8.64	Level	1.36	2.073	0.713	8.555
10/3/2011	21:00	8.64	Level	1.36	2.073	0.713	8.555
10/3/2011	21:15	8.64	Level	1.36	2.073	0.713	8.555
10/3/2011	21:30	8.64	Level	1.36	2.073	0.713	8.555
10/3/2011	21:45	8.64	Level	1.36	2.073	0.713	8.555

10/3/2011 22:00	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/3/2011 22:15	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/3/2011 22:30	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/3/2011 22:45	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/3/2011 23:00	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/3/2011 23:15	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/3/2011 23:30	8.69	Level	1.31	2.073	0.763	9.155	2.04	914.7
10/3/2011 23:45	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/4/2011 0:00	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/4/2011 0:15	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/4/2011 0:30	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/4/2011 0:45	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/4/2011 1:00	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/4/2011 1:15	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/4/2011 1:30	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/4/2011 1:45	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/4/2011 2:00	8.69	Level	1.31	2.073	0.763	9.155	2.04	914.7
10/4/2011 2:15	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/4/2011 2:30	8.69	Level	1.31	2.073	0.763	9.155	2.04	914.7
10/4/2011 2:45	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/4/2011 3:00	8.69	Level	1.31	2.073	0.763	9.155	2.04	914.7
10/4/2011 3:15	8.69	Level	1.31	2.073	0.763	9.155	2.04	914.7
10/4/2011 3:30	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/4/2011 3:45	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/4/2011 4:00	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/4/2011 4:15	8.69	Level	1.31	2.073	0.763	9.155	2.04	914.7
10/4/2011 4:30	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/4/2011 4:45	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/4/2011 5:00	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/4/2011 5:15	8.69	Level	1.31	2.073	0.763	9.155	2.04	914.7
10/4/2011 5:30	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/4/2011 5:45	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/4/2011 6:00	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/4/2011 6:15	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/4/2011 6:30	8.69	Level	1.31	2.073	0.763	9.155	2.04	914.7
10/4/2011 6:45	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/4/2011 7:00	8.69	Level	1.31	2.073	0.763	9.155	2.04	914.7
10/4/2011 7:15	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/4/2011 7:30	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/4/2011 7:45	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/4/2011 8:00	8.6	Level	1.4	2.073	0.673	8.075	1.69	756.7
10/4/2011 8:15	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/4/2011 8:30	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/4/2011 8:45	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/4/2011 9:00	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/4/2011 9:15	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/4/2011 9:30	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7

Time	Parameter	Value	Min	Max	Mean	Std Dev	Series
10/4/2011 9:45	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/4/2011 10:00	8.69 Level	1.31	2.073	0.763	9.155	2.04	914.7
10/4/2011 10:15	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/4/2011 10:30	8.69 Level	1.31	2.073	0.763	9.155	2.04	914.7
10/4/2011 10:45	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/4/2011 11:00	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/4/2011 11:15	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/4/2011 11:30	8.69 Level	1.31	2.073	0.763	9.155	2.04	914.7
10/4/2011 11:45	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/4/2011 12:00	8.69 Level	1.31	2.073	0.763	9.155	2.04	914.7
10/4/2011 12:15	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/4/2011 12:30	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/4/2011 12:45	8.69 Level	1.31	2.073	0.763	9.155	2.04	914.7
10/4/2011 13:00	8.69 Level	1.31	2.073	0.763	9.155	2.04	914.7
10/4/2011 13:15	8.69 Level	1.31	2.073	0.763	9.155	2.04	914.7
10/4/2011 13:30	8.69 Level	1.31	2.073	0.763	9.155	2.04	914.7
10/4/2011 13:45	8.69 Level	1.31	2.073	0.763	9.155	2.04	914.7
10/4/2011 14:00	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/4/2011 14:15	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/4/2011 14:30	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/4/2011 14:45	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/4/2011 15:00	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/4/2011 15:15	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/4/2011 15:30	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/4/2011 15:45	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/4/2011 16:00	8.69 Level	1.31	2.073	0.763	9.155	2.04	914.7
10/4/2011 16:15	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/4/2011 16:30	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/4/2011 16:45	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/4/2011 17:00	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/4/2011 17:15	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/4/2011 17:30	8.69 Level	1.31	2.073	0.763	9.155	2.04	914.7
10/4/2011 17:45	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/4/2011 18:00	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/4/2011 18:15	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/4/2011 18:30	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/4/2011 18:45	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/4/2011 19:00	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/4/2011 19:15	8.69 Level	1.31	2.073	0.763	9.155	2.04	914.7
10/4/2011 19:30	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/4/2011 19:45	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/4/2011 20:00	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/4/2011 20:15	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/4/2011 20:30	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/4/2011 20:45	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/4/2011 21:00	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/4/2011 21:15	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7

Date	Time	Parameter	Value	Min	Max	Avg	Total	
10/5/2011	9:15	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/5/2011	9:30	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/5/2011	9:45	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/5/2011	10:00	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/5/2011	10:15	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/5/2011	10:30	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/5/2011	10:45	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/5/2011	11:00	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/5/2011	11:15	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/5/2011	11:30	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/5/2011	11:45	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/5/2011	12:00	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/5/2011	12:15	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/5/2011	12:30	8.69 Level	1.31	2.073	0.763	9.155	2.04	914.7
10/5/2011	12:45	8.69 Level	1.31	2.073	0.763	9.155	2.04	914.7
10/5/2011	13:00	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/5/2011	13:15	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/5/2011	13:30	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/5/2011	13:45	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/5/2011	14:00	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/5/2011	14:15	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/5/2011	14:30	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/5/2011	14:45	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/5/2011	15:00	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/5/2011	15:15	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/5/2011	15:30	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/5/2011	15:45	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/5/2011	16:00	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/5/2011	16:15	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/5/2011	16:30	8.69 Level	1.31	2.073	0.763	9.155	2.04	914.7
10/5/2011	16:45	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/5/2011	17:00	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/5/2011	17:15	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/5/2011	17:30	8.69 Level	1.31	2.073	0.763	9.155	2.04	914.7
10/5/2011	17:45	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/5/2011	18:00	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/5/2011	18:15	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/5/2011	18:30	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/5/2011	18:45	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/5/2011	19:00	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/5/2011	19:15	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/5/2011	19:30	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/5/2011	19:45	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/5/2011	20:00	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/5/2011	20:15	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/5/2011	20:30	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/5/2011	20:45	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7

10/6/2011 20:30	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/6/2011 20:45	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/6/2011 21:00	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/6/2011 21:15	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/6/2011 21:30	8.6	Level	1.4	2.073	0.673	8.075	1.69	756.7
10/6/2011 21:45	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/6/2011 22:00	8.6	Level	1.4	2.073	0.673	8.075	1.69	756.7
10/6/2011 22:15	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/6/2011 22:30	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/6/2011 22:45	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/6/2011 23:00	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/6/2011 23:15	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/6/2011 23:30	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/6/2011 23:45	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/7/2011 0:00	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/7/2011 0:15	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/7/2011 0:30	8.6	Level	1.4	2.073	0.673	8.075	1.69	756.7
10/7/2011 0:45	8.6	Level	1.4	2.073	0.673	8.075	1.69	756.7
10/7/2011 1:00	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/7/2011 1:15	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/7/2011 1:30	8.6	Level	1.4	2.073	0.673	8.075	1.69	756.7
10/7/2011 1:45	8.6	Level	1.4	2.073	0.673	8.075	1.69	756.7
10/7/2011 2:00	8.6	Level	1.4	2.073	0.673	8.075	1.69	756.7
10/7/2011 2:15	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/7/2011 2:30	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/7/2011 2:45	8.61	Level	1.39	2.073	0.683	8.195	1.72	773.8
10/7/2011 3:00	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/7/2011 3:15	8.6	Level	1.4	2.073	0.673	8.075	1.69	756.7
10/7/2011 3:30	8.6	Level	1.4	2.073	0.673	8.075	1.69	756.7
10/7/2011 3:45	8.6	Level	1.4	2.073	0.673	8.075	1.69	756.7
10/7/2011 4:00	8.61	Level	1.39	2.073	0.683	8.195	1.72	773.8
10/7/2011 4:15	8.61	Level	1.39	2.073	0.683	8.195	1.72	773.8
10/7/2011 4:30	8.56	Level	1.44	2.073	0.633	7.595	1.54	689.8
10/7/2011 4:45	8.6	Level	1.4	2.073	0.673	8.075	1.69	756.7
10/7/2011 5:00	8.6	Level	1.4	2.073	0.673	8.075	1.69	756.7
10/7/2011 5:15	8.61	Level	1.39	2.073	0.683	8.195	1.72	773.8
10/7/2011 5:30	8.6	Level	1.4	2.073	0.673	8.075	1.69	756.7
10/7/2011 5:45	8.61	Level	1.39	2.073	0.683	8.195	1.72	773.8
10/7/2011 6:00	8.6	Level	1.4	2.073	0.673	8.075	1.69	756.7
10/7/2011 6:15	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/7/2011 6:30	8.6	Level	1.4	2.073	0.673	8.075	1.69	756.7
10/7/2011 6:45	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/7/2011 7:00	8.61	Level	1.39	2.073	0.683	8.195	1.72	773.8
10/7/2011 7:15	8.6	Level	1.4	2.073	0.673	8.075	1.69	756.7
10/7/2011 7:30	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/7/2011 7:45	8.61	Level	1.39	2.073	0.683	8.195	1.72	773.8
10/7/2011 8:00	8.6	Level	1.4	2.073	0.673	8.075	1.69	756.7

10/8/2011 19:30	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/8/2011 19:45	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/8/2011 20:00	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/8/2011 20:15	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/8/2011 20:30	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/8/2011 20:45	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/8/2011 21:00	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/8/2011 21:15	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/8/2011 21:30	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/8/2011 21:45	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/8/2011 22:00	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/8/2011 22:15	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/8/2011 22:30	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/8/2011 22:45	7.07 Level	2.93	2.073	-0.857	-10.285	#NUM!	#NUM!
10/8/2011 23:00	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/8/2011 23:15	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/8/2011 23:30	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/8/2011 23:45	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/9/2011 0:00	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/9/2011 0:15	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/9/2011 0:30	8.61 Level	1.39	2.073	0.683	8.195	1.72	773.8
10/9/2011 0:45	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/9/2011 1:00	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/9/2011 1:15	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/9/2011 1:30	8.61 Level	1.39	2.073	0.683	8.195	1.72	773.8
10/9/2011 1:45	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/9/2011 2:00	8.56 Level	1.44	2.073	0.633	7.595	1.54	689.8
10/9/2011 2:15	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/9/2011 2:30	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/9/2011 2:45	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/9/2011 3:00	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/9/2011 3:15	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/9/2011 3:30	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/9/2011 3:45	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/9/2011 4:00	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/9/2011 4:15	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/9/2011 4:30	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/9/2011 4:45	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/9/2011 5:00	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/9/2011 5:15	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/9/2011 5:30	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/9/2011 5:45	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/9/2011 6:00	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/9/2011 6:15	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/9/2011 6:30	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/9/2011 6:45	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/9/2011 7:00	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7

Time	Parameter	Value	Min	Max	Mean	Std Dev	Series
10/9/2011 19:00	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/9/2011 19:15	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/9/2011 19:30	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/9/2011 19:45	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/9/2011 20:00	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/9/2011 20:15	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/9/2011 20:30	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/9/2011 20:45	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/9/2011 21:00	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/9/2011 21:15	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/9/2011 21:30	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/9/2011 21:45	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/9/2011 22:00	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/9/2011 22:15	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/9/2011 22:30	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/9/2011 22:45	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/9/2011 23:00	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/9/2011 23:15	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/9/2011 23:30	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/9/2011 23:45	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/10/2011 0:00	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/10/2011 0:15	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/10/2011 0:30	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/10/2011 0:45	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/10/2011 1:00	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/10/2011 1:15	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/10/2011 1:30	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/10/2011 1:45	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/10/2011 2:00	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/10/2011 2:15	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/10/2011 2:30	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/10/2011 2:45	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/10/2011 3:00	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/10/2011 3:15	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/10/2011 3:30	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/10/2011 3:45	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/10/2011 4:00	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/10/2011 4:15	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/10/2011 4:30	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/10/2011 4:45	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/10/2011 5:00	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/10/2011 5:15	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/10/2011 5:30	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/10/2011 5:45	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/10/2011 6:00	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/10/2011 6:15	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/10/2011 6:30	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3

10/12/2011 5:45	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/12/2011 6:00	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/12/2011 6:15	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/12/2011 6:30	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/12/2011 6:45	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/12/2011 7:00	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/12/2011 7:15	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/12/2011 7:30	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/12/2011 7:45	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/12/2011 8:00	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/12/2011 8:15	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/12/2011 8:30	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/12/2011 8:45	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/12/2011 9:00	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/12/2011 9:15	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/12/2011 9:30	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/12/2011 9:45	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
#####	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
#####	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.69 Level	1.31	2.073	0.763	9.155	2.04	914.7
#####	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.68 Level	1.32	2.073	0.713	8.555	1.84	825.7
#####	8.68 Level	1.32	2.073	0.753	9.035	2.00	896.7
#####	8.68 Level	1.32	2.073	0.753	9.035	2.00	896.7
#####	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.68 Level	1.32	2.073	0.753	9.035	2.00	896.7
#####	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.69 Level	1.31	2.073	0.763	9.155	2.04	914.7
#####	8.69 Level	1.31	2.073	0.763	9.155	2.04	914.7
#####	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.68 Level	1.32	2.073	0.753	9.035	2.00	896.7
#####	8.68 Level	1.32	2.073	0.753	9.035	2.00	896.7
#####	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.63 Level	1.37	2.073	0.703	8.435	1.80	808.3
#####	8.68 Level	1.32	2.073	0.753	9.035	2.00	896.7
#####	8.68 Level	1.32	2.073	0.753	9.035	2.00	896.7
#####	8.68 Level	1.32	2.073	0.753	9.035	2.00	896.7
#####	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7

#####	8.68	Level	1.32	2.073	0.753	9.035	2.00	896.7
#####	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.69	Level	1.31	2.073	0.763	9.155	2.04	914.7
#####	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.69	Level	1.31	2.073	0.763	9.155	2.04	914.7
#####	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
#####	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.6	Level	1.4	2.073	0.673	8.075	1.69	756.7
#####	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.6	Level	1.4	2.073	0.673	8.075	1.69	756.7
#####	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
#####	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
#####	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
#####	8.6	Level	1.4	2.073	0.673	8.075	1.69	756.7
#####	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
#####	8.6	Level	1.4	2.073	0.673	8.075	1.69	756.7
10/14/2011 0:00	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/14/2011 0:15	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/14/2011 0:30	8.6	Level	1.4	2.073	0.673	8.075	1.69	756.7
10/14/2011 0:45	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/14/2011 1:00	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/14/2011 1:15	8.6	Level	1.4	2.073	0.673	8.075	1.69	756.7
10/14/2011 1:30	8.6	Level	1.4	2.073	0.673	8.075	1.69	756.7
10/14/2011 1:45	8.6	Level	1.4	2.073	0.673	8.075	1.69	756.7
10/14/2011 2:00	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/14/2011 2:15	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/14/2011 2:30	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/14/2011 2:45	8.6	Level	1.4	2.073	0.673	8.075	1.69	756.7
10/14/2011 3:00	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/14/2011 3:15	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/14/2011 3:30	8.6	Level	1.4	2.073	0.673	8.075	1.69	756.7
10/14/2011 3:45	8.6	Level	1.4	2.073	0.673	8.075	1.69	756.7
10/14/2011 4:00	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/14/2011 4:15	8.6	Level	1.4	2.073	0.673	8.075	1.69	756.7
10/14/2011 4:30	8.6	Level	1.4	2.073	0.673	8.075	1.69	756.7

10/15/2011 4:15	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/15/2011 4:30	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/15/2011 4:45	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/15/2011 5:00	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/15/2011 5:15	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/15/2011 5:30	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/15/2011 5:45	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/15/2011 6:00	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/15/2011 6:15	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/15/2011 6:30	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/15/2011 6:45	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/15/2011 7:00	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/15/2011 7:15	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/15/2011 7:30	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/15/2011 7:45	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/15/2011 8:00	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/15/2011 8:15	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/15/2011 8:30	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/15/2011 8:45	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/15/2011 9:00	8.65 Level	1.35	2.073	0.723	8.675	1.88	843.3
10/15/2011 9:15	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/15/2011 9:30	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/15/2011 9:45	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.68 Level	1.32	2.073	0.753	9.035	2.00	896.7
#####	8.68 Level	1.32	2.073	0.753	9.035	2.00	896.7
#####	8.68 Level	1.32	2.073	0.753	9.035	2.00	896.7
#####	8.68 Level	1.32	2.073	0.753	9.035	2.00	896.7
#####	8.68 Level	1.32	2.073	0.753	9.035	2.00	896.7
#####	8.68 Level	1.32	2.073	0.753	9.035	2.00	896.7
#####	8.68 Level	1.32	2.073	0.753	9.035	2.00	896.7
#####	8.68 Level	1.32	2.073	0.753	9.035	2.00	896.7
#####	8.63 Level	1.37	2.073	0.703	8.435	1.80	808.3
#####	8.68 Level	1.32	2.073	0.753	9.035	2.00	896.7
#####	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.68 Level	1.32	2.073	0.753	9.035	2.00	896.7
#####	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.68 Level	1.32	2.073	0.753	9.035	2.00	896.7
#####	8.63 Level	1.37	2.073	0.703	8.435	1.80	808.3
#####	8.68 Level	1.32	2.073	0.753	9.035	2.00	896.7
#####	8.68 Level	1.32	2.073	0.753	9.035	2.00	896.7
#####	8.63 Level	1.37	2.073	0.703	8.435	1.80	808.3
#####	8.68 Level	1.32	2.073	0.753	9.035	2.00	896.7
#####	8.68 Level	1.32	2.073	0.753	9.035	2.00	896.7
#####	8.67 Level	1.33	2.073	0.743	8.915	1.96	878.8
#####	8.68 Level	1.32	2.073	0.753	9.035	2.00	896.7
#####	8.67 Level	1.33	2.073	0.743	8.915	1.96	878.8

#####	8.68	Level	1.32	2.073	0.753	9.035	2.00	896.7
#####	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.68	Level	1.32	2.073	0.753	9.035	2.00	896.7
#####	8.68	Level	1.32	2.073	0.753	9.035	2.00	896.7
#####	8.63	Level	1.37	2.073	0.703	8.435	1.80	808.3
#####	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.69	Level	1.31	2.073	0.763	9.155	2.04	914.7
#####	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
#####	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
#####	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
#####	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.59	Level	1.41	2.073	0.663	7.955	1.65	739.8
#####	8.59	Level	1.41	2.073	0.663	7.955	1.65	739.8
#####	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.59	Level	1.41	2.073	0.663	7.955	1.65	739.8
#####	8.6	Level	1.4	2.073	0.673	8.075	1.69	756.7
#####	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/16/2011 0:00	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/16/2011 0:15	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/16/2011 0:30	8.6	Level	1.4	2.073	0.673	8.075	1.69	756.7
10/16/2011 0:45	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/16/2011 1:00	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/16/2011 1:15	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/16/2011 1:30	8.65	Level	1.35	2.073	0.723	8.675	1.88	843.3
10/16/2011 1:45	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/16/2011 2:00	8.6	Level	1.4	2.073	0.673	8.075	1.69	756.7
10/16/2011 2:15	8.6	Level	1.4	2.073	0.673	8.075	1.69	756.7
10/16/2011 2:30	8.6	Level	1.4	2.073	0.673	8.075	1.69	756.7
10/16/2011 2:45	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/16/2011 3:00	8.64	Level	1.36	2.073	0.713	8.555	1.84	825.7
10/16/2011 3:15	8.6	Level	1.4	2.073	0.673	8.075	1.69	756.7
10/16/2011 3:30	8.6	Level	1.4	2.073	0.673	8.075	1.69	756.7

10/19/2011 2:15	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/19/2011 2:30	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/19/2011 2:45	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/19/2011 3:00	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/19/2011 3:15	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/19/2011 3:30	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/19/2011 3:45	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/19/2011 4:00	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/19/2011 4:15	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/19/2011 4:30	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/19/2011 4:45	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/19/2011 5:00	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/19/2011 5:15	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/19/2011 5:30	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
10/19/2011 5:45	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/19/2011 6:00	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/19/2011 6:15	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/19/2011 6:30	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/19/2011 6:45	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/19/2011 7:00	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/19/2011 7:15	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/19/2011 7:30	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/19/2011 7:45	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/19/2011 8:00	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/19/2011 8:15	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/19/2011 8:30	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/19/2011 8:45	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/19/2011 9:00	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/19/2011 9:15	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/19/2011 9:30	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/19/2011 9:45	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
#####	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.59 Level	1.41	2.073	0.663	7.955	1.65	739.8
#####	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.63 Level	1.37	2.073	0.703	8.435	1.80	808.3
#####	8.63 Level	1.37	2.073	0.703	8.435	1.80	808.3
#####	8.63 Level	1.37	2.073	0.703	8.435	1.80	808.3
#####	8.63 Level	1.37	2.073	0.703	8.435	1.80	808.3
#####	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.68 Level	1.32	2.073	0.753	9.035	2.00	896.7

#####	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.68 Level	1.32	2.073	0.753	9.035	2.00	896.7
#####	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.63 Level	1.37	2.073	0.703	8.435	1.80	808.3
#####	8.68 Level	1.32	2.073	0.753	9.035	2.00	896.7
#####	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.63 Level	1.37	2.073	0.703	8.435	1.80	808.3
#####	7.1 Level	2.9	2.073	-0.827	-9.925	#NUM!	#NUM!
#####	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.59 Level	1.41	2.073	0.663	7.955	1.65	739.8
#####	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
#####	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
#####	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
#####	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
#####	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
#####	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
#####	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
#####	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
#####	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
#####	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
#####	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
#####	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
#####	8.64 Level	1.36	2.073	0.713	8.555	1.84	825.7
#####	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
#####	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/20/2011 0:00	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/20/2011 0:15	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/20/2011 0:30	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/20/2011 0:45	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/20/2011 1:00	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/20/2011 1:15	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7
10/20/2011 1:30	8.6 Level	1.4	2.073	0.673	8.075	1.69	756.7

Appendix H

South Flume Orpheus Mini Data with Flowrates

Date	Time	Depth from top of flume to water (ft)	Depth of Flume Total (ft)	Depth of Flow (ft)	Flowrate (cfs)	Flowrate (gpm)
10/1/2011	12:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/1/2011	1:00:00 AM	1.88	2.5	0.62	1.49	668.7
10/1/2011	2:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/1/2011	3:00:00 AM	1.88	2.5	0.62	1.49	668.7
10/1/2011	4:00:00 AM	1.87	2.5	0.63	1.53	685.0
10/1/2011	5:00:00 AM	1.84	2.5	0.66	1.64	734.9
10/1/2011	6:00:00 AM	1.84	2.5	0.66	1.64	734.9
10/1/2011	7:00:00 AM	1.83	2.5	0.67	1.68	751.8
10/1/2011	8:00:00 AM	1.82	2.5	0.68	1.71	768.8
10/1/2011	9:00:00 AM	1.84	2.5	0.66	1.64	734.9
10/1/2011	10:00:00 AM	1.86	2.5	0.64	1.56	701.5
10/1/2011	11:00:00 AM	1.88	2.5	0.62	1.49	668.7
10/1/2011	12:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/1/2011	1:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/1/2011	2:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/1/2011	3:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/1/2011	4:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/1/2011	5:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/1/2011	6:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/1/2011	7:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/1/2011	8:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/1/2011	9:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/1/2011	10:00:00 PM	1.91	2.5	0.59	1.38	620.4
10/1/2011	11:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/2/2011	12:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/2/2011	1:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/2/2011	2:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/2/2011	3:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/2/2011	4:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/2/2011	5:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/2/2011	6:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/2/2011	7:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/2/2011	8:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/2/2011	9:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/2/2011	10:00:00 AM	1.88	2.5	0.62	1.49	668.7
10/2/2011	11:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/2/2011	12:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/2/2011	1:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/2/2011	2:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/2/2011	3:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/2/2011	4:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/2/2011	5:00:00 PM	1.88	2.5	0.62	1.49	668.7
10/2/2011	6:00:00 PM	1.88	2.5	0.62	1.49	668.7
10/2/2011	7:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/2/2011	8:00:00 PM	1.89	2.5	0.61	1.45	652.4

10/2/2011	9:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/2/2011	10:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/2/2011	11:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/3/2011	12:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/3/2011	1:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/3/2011	2:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/3/2011	3:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/3/2011	4:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/3/2011	5:00:00 AM	1.86	2.5	0.64	1.56	701.5
10/3/2011	6:00:00 AM	1.88	2.5	0.62	1.49	668.7
10/3/2011	7:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/3/2011	8:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/3/2011	9:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/3/2011	10:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/3/2011	11:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/3/2011	12:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/3/2011	1:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/3/2011	2:00:00 PM	1.88	2.5	0.62	1.49	668.7
10/3/2011	3:00:00 PM	1.86	2.5	0.64	1.56	701.5
10/3/2011	4:00:00 PM	1.86	2.5	0.64	1.56	701.5
10/3/2011	5:00:00 PM	1.85	2.5	0.65	1.60	718.1
10/3/2011	6:00:00 PM	1.83	2.5	0.67	1.68	751.8
10/3/2011	7:00:00 PM	1.83	2.5	0.67	1.68	751.8
10/3/2011	8:00:00 PM	1.83	2.5	0.67	1.68	751.8
10/3/2011	9:00:00 PM	1.84	2.5	0.66	1.64	734.9
10/3/2011	10:00:00 PM	1.85	2.5	0.65	1.60	718.1
10/3/2011	11:00:00 PM	1.86	2.5	0.64	1.56	701.5
10/4/2011	12:00:00 AM	1.86	2.5	0.64	1.56	701.5
10/4/2011	1:00:00 AM	1.87	2.5	0.63	1.53	685.0
10/4/2011	2:00:00 AM	1.87	2.5	0.63	1.53	685.0
10/4/2011	3:00:00 AM	1.88	2.5	0.62	1.49	668.7
10/4/2011	4:00:00 AM	1.87	2.5	0.63	1.53	685.0
10/4/2011	5:00:00 AM	1.88	2.5	0.62	1.49	668.7
10/4/2011	6:00:00 AM	1.88	2.5	0.62	1.49	668.7
10/4/2011	7:00:00 AM	1.88	2.5	0.62	1.49	668.7
10/4/2011	8:00:00 AM	1.88	2.5	0.62	1.49	668.7
10/4/2011	9:00:00 AM	1.88	2.5	0.62	1.49	668.7
10/4/2011	10:00:00 AM	1.88	2.5	0.62	1.49	668.7
10/4/2011	11:00:00 AM	1.88	2.5	0.62	1.49	668.7
10/4/2011	12:00:00 PM	1.87	2.5	0.63	1.53	685.0
10/4/2011	1:00:00 PM	1.85	2.5	0.65	1.60	718.1
10/4/2011	2:00:00 PM	1.81	2.5	0.69	1.75	785.9
10/4/2011	3:00:00 PM	1.78	2.5	0.72	1.87	838.1
10/4/2011	4:00:00 PM	1.78	2.5	0.72	1.87	838.1
10/4/2011	5:00:00 PM	1.77	2.5	0.73	1.91	855.8
10/4/2011	6:00:00 PM	1.78	2.5	0.72	1.87	838.1
10/4/2011	7:00:00 PM	1.78	2.5	0.72	1.87	838.1

10/4/2011	8:00:00 PM	1.79	2.5	0.71	1.83	820.6
10/4/2011	9:00:00 PM	1.79	2.5	0.71	1.83	820.6
10/4/2011	10:00:00 PM	1.8	2.5	0.70	1.79	803.2
10/4/2011	11:00:00 PM	1.82	2.5	0.68	1.71	768.8
10/5/2011	12:00:00 AM	1.82	2.5	0.68	1.71	768.8
10/5/2011	1:00:00 AM	1.81	2.5	0.69	1.75	785.9
10/5/2011	2:00:00 AM	1.8	2.5	0.70	1.79	803.2
10/5/2011	3:00:00 AM	1.82	2.5	0.68	1.71	768.8
10/5/2011	4:00:00 AM	1.83	2.5	0.67	1.68	751.8
10/5/2011	5:00:00 AM	1.83	2.5	0.67	1.68	751.8
10/5/2011	6:00:00 AM	1.84	2.5	0.66	1.64	734.9
10/5/2011	7:00:00 AM	1.85	2.5	0.65	1.60	718.1
10/5/2011	8:00:00 AM	1.85	2.5	0.65	1.60	718.1
10/5/2011	9:00:00 AM	1.85	2.5	0.65	1.60	718.1
10/5/2011	10:00:00 AM	1.85	2.5	0.65	1.60	718.1
10/5/2011	11:00:00 AM	1.85	2.5	0.65	1.60	718.1
10/5/2011	12:00:00 PM	1.85	2.5	0.65	1.60	718.1
10/5/2011	1:00:00 PM	1.86	2.5	0.64	1.56	701.5
10/5/2011	2:00:00 PM	1.87	2.5	0.63	1.53	685.0
10/5/2011	3:00:00 PM	1.87	2.5	0.63	1.53	685.0
10/5/2011	4:00:00 PM	1.87	2.5	0.63	1.53	685.0
10/5/2011	5:00:00 PM	1.87	2.5	0.63	1.53	685.0
10/5/2011	6:00:00 PM	1.88	2.5	0.62	1.49	668.7
10/5/2011	7:00:00 PM	1.88	2.5	0.62	1.49	668.7
10/5/2011	8:00:00 PM	1.88	2.5	0.62	1.49	668.7
10/5/2011	9:00:00 PM	1.88	2.5	0.62	1.49	668.7
10/5/2011	10:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/5/2011	11:00:00 PM	1.88	2.5	0.62	1.49	668.7
10/6/2011	12:00:00 AM	1.88	2.5	0.62	1.49	668.7
10/6/2011	1:00:00 AM	1.87	2.5	0.63	1.53	685.0
10/6/2011	2:00:00 AM	1.86	2.5	0.64	1.56	701.5
10/6/2011	3:00:00 AM	1.84	2.5	0.66	1.64	734.9
10/6/2011	4:00:00 AM	1.81	2.5	0.69	1.75	785.9
10/6/2011	5:00:00 AM	1.78	2.5	0.72	1.87	838.1
10/6/2011	6:00:00 AM	1.78	2.5	0.72	1.87	838.1
10/6/2011	7:00:00 AM	1.78	2.5	0.72	1.87	838.1
10/6/2011	8:00:00 AM	1.79	2.5	0.71	1.83	820.6
10/6/2011	9:00:00 AM	1.79	2.5	0.71	1.83	820.6
10/6/2011	10:00:00 AM	1.75	2.5	0.75	1.99	891.5
10/6/2011	11:00:00 AM	1.74	2.5	0.76	2.03	909.5
10/6/2011	12:00:00 PM	1.73	2.5	0.77	2.07	927.6
10/6/2011	1:00:00 PM	1.74	2.5	0.76	2.03	909.5
10/6/2011	2:00:00 PM	1.75	2.5	0.75	1.99	891.5
10/6/2011	3:00:00 PM	1.76	2.5	0.74	1.95	873.6
10/6/2011	4:00:00 PM	1.77	2.5	0.73	1.91	855.8
10/6/2011	5:00:00 PM	1.78	2.5	0.72	1.87	838.1
10/6/2011	6:00:00 PM	1.79	2.5	0.71	1.83	820.6

10/6/2011	7:00:00 PM	1.8	2.5	0.70	1.79	803.2
10/6/2011	8:00:00 PM	1.81	2.5	0.69	1.75	785.9
10/6/2011	9:00:00 PM	1.81	2.5	0.69	1.75	785.9
10/6/2011	10:00:00 PM	1.81	2.5	0.69	1.75	785.9
10/6/2011	11:00:00 PM	1.82	2.5	0.68	1.71	768.8
10/7/2011	12:00:00 AM	1.83	2.5	0.67	1.68	751.8
10/7/2011	1:00:00 AM	1.83	2.5	0.67	1.68	751.8
10/7/2011	2:00:00 AM	1.84	2.5	0.66	1.64	734.9
10/7/2011	3:00:00 AM	1.84	2.5	0.66	1.64	734.9
10/7/2011	4:00:00 AM	1.84	2.5	0.66	1.64	734.9
10/7/2011	5:00:00 AM	1.85	2.5	0.65	1.60	718.1
10/7/2011	6:00:00 AM	1.85	2.5	0.65	1.60	718.1
10/7/2011	7:00:00 AM	1.87	2.5	0.63	1.53	685.0
10/7/2011	8:00:00 AM	1.86	2.5	0.64	1.56	701.5
10/7/2011	9:00:00 AM	1.86	2.5	0.64	1.56	701.5
10/7/2011	10:00:00 AM	1.86	2.5	0.64	1.56	701.5
10/7/2011	11:00:00 AM	1.87	2.5	0.63	1.53	685.0
10/7/2011	12:00:00 PM	1.87	2.5	0.63	1.53	685.0
10/7/2011	1:00:00 PM	1.87	2.5	0.63	1.53	685.0
10/7/2011	2:00:00 PM	1.86	2.5	0.64	1.56	701.5
10/7/2011	3:00:00 PM	1.87	2.5	0.63	1.53	685.0
10/7/2011	4:00:00 PM	1.86	2.5	0.64	1.56	701.5
10/7/2011	5:00:00 PM	1.86	2.5	0.64	1.56	701.5
10/7/2011	6:00:00 PM	1.86	2.5	0.64	1.56	701.5
10/7/2011	7:00:00 PM	1.85	2.5	0.65	1.60	718.1
10/7/2011	8:00:00 PM	1.84	2.5	0.66	1.64	734.9
10/7/2011	9:00:00 PM	1.84	2.5	0.66	1.64	734.9
10/7/2011	10:00:00 PM	1.83	2.5	0.67	1.68	751.8
10/7/2011	11:00:00 PM	1.84	2.5	0.66	1.64	734.9
10/8/2011	12:00:00 AM	1.83	2.5	0.67	1.68	751.8
10/8/2011	1:00:00 AM	1.84	2.5	0.66	1.64	734.9
10/8/2011	2:00:00 AM	1.84	2.5	0.66	1.64	734.9
10/8/2011	3:00:00 AM	1.85	2.5	0.65	1.60	718.1
10/8/2011	4:00:00 AM	1.84	2.5	0.66	1.64	734.9
10/8/2011	5:00:00 AM	1.84	2.5	0.66	1.64	734.9
10/8/2011	6:00:00 AM	1.84	2.5	0.66	1.64	734.9
10/8/2011	7:00:00 AM	1.85	2.5	0.65	1.60	718.1
10/8/2011	8:00:00 AM	1.86	2.5	0.64	1.56	701.5
10/8/2011	9:00:00 AM	1.86	2.5	0.64	1.56	701.5
10/8/2011	10:00:00 AM	1.86	2.5	0.64	1.56	701.5
10/8/2011	11:00:00 AM	1.86	2.5	0.64	1.56	701.5
10/8/2011	12:00:00 PM	1.87	2.5	0.63	1.53	685.0
10/8/2011	1:00:00 PM	1.87	2.5	0.63	1.53	685.0
10/8/2011	2:00:00 PM	1.86	2.5	0.64	1.56	701.5
10/8/2011	3:00:00 PM	1.87	2.5	0.63	1.53	685.0
10/8/2011	4:00:00 PM	1.87	2.5	0.63	1.53	685.0
10/8/2011	5:00:00 PM	1.88	2.5	0.62	1.49	668.7

10/8/2011	6:00:00 PM	1.88	2.5	0.62	1.49	668.7
10/8/2011	7:00:00 PM	1.88	2.5	0.62	1.49	668.7
10/8/2011	8:00:00 PM	1.87	2.5	0.63	1.53	685.0
10/8/2011	9:00:00 PM	1.88	2.5	0.62	1.49	668.7
10/8/2011	10:00:00 PM	1.88	2.5	0.62	1.49	668.7
10/8/2011	11:00:00 PM	1.88	2.5	0.62	1.49	668.7
10/9/2011	12:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/9/2011	1:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/9/2011	2:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/9/2011	3:00:00 AM	1.88	2.5	0.62	1.49	668.7
10/9/2011	4:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/9/2011	5:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/9/2011	6:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/9/2011	7:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/9/2011	8:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/9/2011	9:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/9/2011	10:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/9/2011	11:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/9/2011	12:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/9/2011	1:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/9/2011	2:00:00 PM	1.88	2.5	0.62	1.49	668.7
10/9/2011	3:00:00 PM	1.88	2.5	0.62	1.49	668.7
10/9/2011	4:00:00 PM	1.87	2.5	0.63	1.53	685.0
10/9/2011	5:00:00 PM	1.87	2.5	0.63	1.53	685.0
10/9/2011	6:00:00 PM	1.87	2.5	0.63	1.53	685.0
10/9/2011	7:00:00 PM	1.88	2.5	0.62	1.49	668.7
10/9/2011	8:00:00 PM	1.87	2.5	0.63	1.53	685.0
10/9/2011	9:00:00 PM	1.86	2.5	0.64	1.56	701.5
10/9/2011	10:00:00 PM	1.87	2.5	0.63	1.53	685.0
10/9/2011	11:00:00 PM	1.86	2.5	0.64	1.56	701.5
10/10/2011	12:00:00 AM	1.86	2.5	0.64	1.56	701.5
10/10/2011	1:00:00 AM	1.86	2.5	0.64	1.56	701.5
10/10/2011	2:00:00 AM	1.87	2.5	0.63	1.53	685.0
10/10/2011	3:00:00 AM	1.87	2.5	0.63	1.53	685.0
10/10/2011	4:00:00 AM	1.87	2.5	0.63	1.53	685.0
10/10/2011	5:00:00 AM	1.87	2.5	0.63	1.53	685.0
10/10/2011	6:00:00 AM	1.88	2.5	0.62	1.49	668.7
10/10/2011	7:00:00 AM	1.88	2.5	0.62	1.49	668.7
10/10/2011	8:00:00 AM	1.88	2.5	0.62	1.49	668.7
10/10/2011	9:00:00 AM	1.87	2.5	0.63	1.53	685.0
10/10/2011	10:00:00 AM	1.88	2.5	0.62	1.49	668.7
10/10/2011	11:00:00 AM	1.88	2.5	0.62	1.49	668.7
10/10/2011	12:00:00 PM	1.87	2.5	0.63	1.53	685.0
10/10/2011	1:00:00 PM	1.88	2.5	0.62	1.49	668.7
10/10/2011	2:00:00 PM	1.87	2.5	0.63	1.53	685.0
10/10/2011	3:00:00 PM	1.88	2.5	0.62	1.49	668.7
10/10/2011	4:00:00 PM	1.88	2.5	0.62	1.49	668.7

10/10/2011	5:00:00 PM	1.88	2.5	0.62	1.49	668.7
10/10/2011	6:00:00 PM	1.88	2.5	0.62	1.49	668.7
10/10/2011	7:00:00 PM	1.88	2.5	0.62	1.49	668.7
10/10/2011	8:00:00 PM	1.88	2.5	0.62	1.49	668.7
10/10/2011	9:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/10/2011	10:00:00 PM	1.88	2.5	0.62	1.49	668.7
10/10/2011	11:00:00 PM	1.88	2.5	0.62	1.49	668.7
10/11/2011	12:00:00 AM	1.88	2.5	0.62	1.49	668.7
10/11/2011	1:00:00 AM	1.88	2.5	0.62	1.49	668.7
10/11/2011	2:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/11/2011	3:00:00 AM	1.88	2.5	0.62	1.49	668.7
10/11/2011	4:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/11/2011	5:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/11/2011	6:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/11/2011	7:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/11/2011	8:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/11/2011	9:00:00 AM	1.88	2.5	0.62	1.49	668.7
10/11/2011	10:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/11/2011	11:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/11/2011	12:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/11/2011	1:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/11/2011	2:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/11/2011	3:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/11/2011	4:00:00 PM	1.88	2.5	0.62	1.49	668.7
10/11/2011	5:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/11/2011	6:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/11/2011	7:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/11/2011	8:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/11/2011	9:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/11/2011	10:00:00 PM	1.88	2.5	0.62	1.49	668.7
10/11/2011	11:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/12/2011	12:00:00 AM	1.88	2.5	0.62	1.49	668.7
10/12/2011	1:00:00 AM	1.88	2.5	0.62	1.49	668.7
10/12/2011	2:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/12/2011	3:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/12/2011	4:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/12/2011	5:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/12/2011	6:00:00 AM	1.88	2.5	0.62	1.49	668.7
10/12/2011	7:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/12/2011	8:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/12/2011	9:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/12/2011	10:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/12/2011	11:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/12/2011	12:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/12/2011	1:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/12/2011	2:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/12/2011	3:00:00 PM	1.89	2.5	0.61	1.45	652.4

10/12/2011	4:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/12/2011	5:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/12/2011	6:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/12/2011	7:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/12/2011	8:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/12/2011	9:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/12/2011	10:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/12/2011	11:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/13/2011	12:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/13/2011	1:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/13/2011	2:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/13/2011	3:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/13/2011	4:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/13/2011	5:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/13/2011	6:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/13/2011	7:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/13/2011	8:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/13/2011	9:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/13/2011	10:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/13/2011	11:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/13/2011	12:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/13/2011	1:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/13/2011	2:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/13/2011	3:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/13/2011	4:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/13/2011	5:00:00 PM	1.91	2.5	0.59	1.38	620.4
10/13/2011	6:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/13/2011	7:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/13/2011	8:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/13/2011	9:00:00 PM	1.88	2.5	0.62	1.49	668.7
10/13/2011	10:00:00 PM	1.85	2.5	0.65	1.60	718.1
10/13/2011	11:00:00 PM	1.85	2.5	0.65	1.60	718.1
10/14/2011	12:00:00 AM	1.83	2.5	0.67	1.68	751.8
10/14/2011	1:00:00 AM	1.83	2.5	0.67	1.68	751.8
10/14/2011	2:00:00 AM	1.82	2.5	0.68	1.71	768.8
10/14/2011	3:00:00 AM	1.82	2.5	0.68	1.71	768.8
10/14/2011	4:00:00 AM	1.8	2.5	0.70	1.79	803.2
10/14/2011	5:00:00 AM	1.8	2.5	0.70	1.79	803.2
10/14/2011	6:00:00 AM	1.8	2.5	0.70	1.79	803.2
10/14/2011	7:00:00 AM	1.8	2.5	0.70	1.79	803.2
10/14/2011	8:00:00 AM	1.81	2.5	0.69	1.75	785.9
10/14/2011	9:00:00 AM	1.82	2.5	0.68	1.71	768.8
10/14/2011	10:00:00 AM	1.84	2.5	0.66	1.64	734.9
10/14/2011	11:00:00 AM	1.86	2.5	0.64	1.56	701.5
10/14/2011	12:00:00 PM	1.87	2.5	0.63	1.53	685.0
10/14/2011	1:00:00 PM	1.87	2.5	0.63	1.53	685.0
10/14/2011	2:00:00 PM	1.88	2.5	0.62	1.49	668.7

10/14/2011	3:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/14/2011	4:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/14/2011	5:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/14/2011	6:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/14/2011	7:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/14/2011	8:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/14/2011	9:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/14/2011	10:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/14/2011	11:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/15/2011	12:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/15/2011	1:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/15/2011	2:00:00 AM	1.96	2.5	0.54	1.21	542.7
10/15/2011	3:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/15/2011	4:00:00 AM	1.86	2.5	0.64	1.56	701.5
10/15/2011	5:00:00 AM	1.78	2.5	0.72	1.87	838.1
10/15/2011	6:00:00 AM	1.72	2.5	0.78	2.11	945.9
10/15/2011	7:00:00 AM	1.69	2.5	0.81	2.23	1001.4
10/15/2011	8:00:00 AM	1.66	2.5	0.84	2.36	1057.9
10/15/2011	9:00:00 AM	1.63	2.5	0.87	2.49	1115.5
10/15/2011	10:00:00 AM	1.61	2.5	0.89	2.57	1154.5
10/15/2011	11:00:00 AM	1.59	2.5	0.91	2.66	1193.9
10/15/2011	12:00:00 PM	1.58	2.5	0.92	2.70	1213.8
10/15/2011	1:00:00 PM	1.58	2.5	0.92	2.70	1213.8
10/15/2011	2:00:00 PM	1.57	2.5	0.93	2.75	1233.7
10/15/2011	3:00:00 PM	1.57	2.5	0.93	2.75	1233.7
10/15/2011	4:00:00 PM	1.57	2.5	0.93	2.75	1233.7
10/15/2011	5:00:00 PM	1.57	2.5	0.93	2.75	1233.7
10/15/2011	6:00:00 PM	1.57	2.5	0.93	2.75	1233.7
10/15/2011	7:00:00 PM	1.57	2.5	0.93	2.75	1233.7
10/15/2011	8:00:00 PM	1.57	2.5	0.93	2.75	1233.7
10/15/2011	9:00:00 PM	1.56	2.5	0.94	2.79	1253.8
10/15/2011	10:00:00 PM	1.56	2.5	0.94	2.79	1253.8
10/15/2011	11:00:00 PM	1.56	2.5	0.94	2.79	1253.8
10/16/2011	12:00:00 AM	1.56	2.5	0.94	2.79	1253.8
10/16/2011	1:00:00 AM	1.63	2.5	0.87	2.49	1115.5
10/16/2011	2:00:00 AM	1.59	2.5	0.91	2.66	1193.9
10/16/2011	3:00:00 AM	1.56	2.5	0.94	2.79	1253.8
10/16/2011	4:00:00 AM	1.67	2.5	0.83	2.31	1038.9
10/16/2011	5:00:00 AM	1.59	2.5	0.91	2.66	1193.9
10/16/2011	6:00:00 AM	1.57	2.5	0.93	2.75	1233.7
10/16/2011	7:00:00 AM	1.53	2.5	0.97	2.93	1314.8
10/16/2011	8:00:00 AM	1.52	2.5	0.98	2.98	1335.3
10/16/2011	9:00:00 AM	1.51	2.5	0.99	3.02	1356.0
10/16/2011	10:00:00 AM	1.36	2.5	1.14	3.74	1678.0
10/16/2011	11:00:00 AM	1.64	2.5	0.86	2.44	1096.2
10/16/2011	12:00:00 PM	1.77	2.5	0.73	1.91	855.8
10/16/2011	1:00:00 PM	1.84	2.5	0.66	1.64	734.9

10/16/2011	2:00:00 PM	1.87	2.5	0.63	1.53	685.0
10/16/2011	3:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/16/2011	4:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/16/2011	5:00:00 PM	1.91	2.5	0.59	1.38	620.4
10/16/2011	6:00:00 PM	1.91	2.5	0.59	1.38	620.4
10/16/2011	7:00:00 PM	1.92	2.5	0.58	1.35	604.6
10/16/2011	8:00:00 PM	1.92	2.5	0.58	1.35	604.6
10/16/2011	9:00:00 PM	1.92	2.5	0.58	1.35	604.6
10/16/2011	10:00:00 PM	1.92	2.5	0.58	1.35	604.6
10/16/2011	11:00:00 PM	1.92	2.5	0.58	1.35	604.6
10/17/2011	12:00:00 AM	1.92	2.5	0.58	1.35	604.6
10/17/2011	1:00:00 AM	1.93	2.5	0.57	1.31	588.9
10/17/2011	2:00:00 AM	1.92	2.5	0.58	1.35	604.6
10/17/2011	3:00:00 AM	1.92	2.5	0.58	1.35	604.6
10/17/2011	4:00:00 AM	1.91	2.5	0.59	1.38	620.4
10/17/2011	5:00:00 AM	1.93	2.5	0.57	1.31	588.9
10/17/2011	6:00:00 AM	1.92	2.5	0.58	1.35	604.6
10/17/2011	7:00:00 AM	1.92	2.5	0.58	1.35	604.6
10/17/2011	8:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/17/2011	9:00:00 AM	1.86	2.5	0.64	1.56	701.5
10/17/2011	10:00:00 AM	1.86	2.5	0.64	1.56	701.5
10/17/2011	11:00:00 AM	1.84	2.5	0.66	1.64	734.9
10/17/2011	12:00:00 PM	1.87	2.5	0.63	1.53	685.0
10/17/2011	1:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/17/2011	2:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/17/2011	3:00:00 PM	1.92	2.5	0.58	1.35	604.6
10/17/2011	4:00:00 PM	1.92	2.5	0.58	1.35	604.6
10/17/2011	5:00:00 PM	1.91	2.5	0.59	1.38	620.4
10/17/2011	6:00:00 PM	1.93	2.5	0.57	1.31	588.9
10/17/2011	7:00:00 PM	1.92	2.5	0.58	1.35	604.6
10/17/2011	8:00:00 PM	1.92	2.5	0.58	1.35	604.6
10/17/2011	9:00:00 PM	1.92	2.5	0.58	1.35	604.6
10/17/2011	10:00:00 PM	1.92	2.5	0.58	1.35	604.6
10/17/2011	11:00:00 PM	1.93	2.5	0.57	1.31	588.9
10/18/2011	12:00:00 AM	1.92	2.5	0.58	1.35	604.6
10/18/2011	1:00:00 AM	1.92	2.5	0.58	1.35	604.6
10/18/2011	2:00:00 AM	1.92	2.5	0.58	1.35	604.6
10/18/2011	3:00:00 AM	1.92	2.5	0.58	1.35	604.6
10/18/2011	4:00:00 AM	1.93	2.5	0.57	1.31	588.9
10/18/2011	5:00:00 AM	1.92	2.5	0.58	1.35	604.6
10/18/2011	6:00:00 AM	1.92	2.5	0.58	1.35	604.6
10/18/2011	7:00:00 AM	1.91	2.5	0.59	1.38	620.4
10/18/2011	8:00:00 AM	1.91	2.5	0.59	1.38	620.4
10/18/2011	9:00:00 AM	1.91	2.5	0.59	1.38	620.4
10/18/2011	10:00:00 AM	1.91	2.5	0.59	1.38	620.4
10/18/2011	11:00:00 AM	1.91	2.5	0.59	1.38	620.4
10/18/2011	12:00:00 PM	1.91	2.5	0.59	1.38	620.4

10/18/2011	1:00:00 PM	1.91	2.5	0.59	1.38	620.4
10/18/2011	2:00:00 PM	1.92	2.5	0.58	1.35	604.6
10/18/2011	3:00:00 PM	1.92	2.5	0.58	1.35	604.6
10/18/2011	4:00:00 PM	1.92	2.5	0.58	1.35	604.6
10/18/2011	5:00:00 PM	1.92	2.5	0.58	1.35	604.6
10/18/2011	6:00:00 PM	1.92	2.5	0.58	1.35	604.6
10/18/2011	7:00:00 PM	1.92	2.5	0.58	1.35	604.6
10/18/2011	8:00:00 PM	1.92	2.5	0.58	1.35	604.6
10/18/2011	9:00:00 PM	1.92	2.5	0.58	1.35	604.6
10/18/2011	10:00:00 PM	1.91	2.5	0.59	1.38	620.4
10/18/2011	11:00:00 PM	1.92	2.5	0.58	1.35	604.6
10/19/2011	12:00:00 AM	1.92	2.5	0.58	1.35	604.6
10/19/2011	1:00:00 AM	1.83	2.5	0.67	1.68	751.8
10/19/2011	2:00:00 AM	1.8	2.5	0.70	1.79	803.2
10/19/2011	3:00:00 AM	1.88	2.5	0.62	1.49	668.7
10/19/2011	4:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/19/2011	5:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/19/2011	6:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/19/2011	7:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/19/2011	8:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/19/2011	9:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/19/2011	10:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/19/2011	11:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/19/2011	12:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/19/2011	1:00:00 PM	1.84	2.5	0.66	1.64	734.9
10/19/2011	2:00:00 PM	1.8	2.5	0.70	1.79	803.2
10/19/2011	3:00:00 PM	1.83	2.5	0.67	1.68	751.8
10/19/2011	4:00:00 PM	1.84	2.5	0.66	1.64	734.9
10/19/2011	5:00:00 PM	1.86	2.5	0.64	1.56	701.5
10/19/2011	6:00:00 PM	1.88	2.5	0.62	1.49	668.7
10/19/2011	7:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/19/2011	8:00:00 PM	1.91	2.5	0.59	1.38	620.4
10/19/2011	9:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/19/2011	10:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/19/2011	11:00:00 PM	1.91	2.5	0.59	1.38	620.4
10/20/2011	12:00:00 AM	1.91	2.5	0.59	1.38	620.4
10/20/2011	1:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/20/2011	2:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/20/2011	3:00:00 AM	1.91	2.5	0.59	1.38	620.4
10/20/2011	4:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/20/2011	5:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/20/2011	6:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/20/2011	7:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/20/2011	8:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/20/2011	9:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/20/2011	10:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/20/2011	11:00:00 AM	1.9	2.5	0.60	1.42	636.4

10/20/2011	12:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/20/2011	1:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/20/2011	2:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/20/2011	3:00:00 PM	1.91	2.5	0.59	1.38	620.4
10/20/2011	4:00:00 PM	1.91	2.5	0.59	1.38	620.4
10/20/2011	5:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/20/2011	6:00:00 PM	1.91	2.5	0.59	1.38	620.4
10/20/2011	7:00:00 PM	1.91	2.5	0.59	1.38	620.4
10/20/2011	8:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/20/2011	9:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/20/2011	10:00:00 PM	1.91	2.5	0.59	1.38	620.4
10/20/2011	11:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/21/2011	12:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/21/2011	1:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/21/2011	2:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/21/2011	3:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/21/2011	4:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/21/2011	5:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/21/2011	6:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/21/2011	7:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/21/2011	8:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/21/2011	9:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/21/2011	10:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/21/2011	11:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/21/2011	12:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/21/2011	1:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/21/2011	2:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/21/2011	3:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/21/2011	4:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/21/2011	5:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/21/2011	6:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/21/2011	7:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/21/2011	8:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/21/2011	9:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/21/2011	10:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/21/2011	11:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/22/2011	12:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/22/2011	1:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/22/2011	2:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/22/2011	3:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/22/2011	4:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/22/2011	5:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/22/2011	6:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/22/2011	7:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/22/2011	8:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/22/2011	9:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/22/2011	10:00:00 AM	1.9	2.5	0.60	1.42	636.4

10/22/2011	11:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/22/2011	12:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/22/2011	1:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/22/2011	2:00:00 PM	1.91	2.5	0.59	1.38	620.4
10/22/2011	3:00:00 PM	1.91	2.5	0.59	1.38	620.4
10/22/2011	4:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/22/2011	5:00:00 PM	1.91	2.5	0.59	1.38	620.4
10/22/2011	6:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/22/2011	7:00:00 PM	1.91	2.5	0.59	1.38	620.4
10/22/2011	8:00:00 PM	1.91	2.5	0.59	1.38	620.4
10/22/2011	9:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/22/2011	10:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/22/2011	11:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/23/2011	12:00:00 AM	1.91	2.5	0.59	1.38	620.4
10/23/2011	1:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/23/2011	2:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/23/2011	3:00:00 AM	1.91	2.5	0.59	1.38	620.4
10/23/2011	4:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/23/2011	5:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/23/2011	6:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/23/2011	7:00:00 AM	1.91	2.5	0.59	1.38	620.4
10/23/2011	8:00:00 AM	1.91	2.5	0.59	1.38	620.4
10/23/2011	9:00:00 AM	1.91	2.5	0.59	1.38	620.4
10/23/2011	10:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/23/2011	11:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/23/2011	12:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/23/2011	1:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/23/2011	2:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/23/2011	3:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/23/2011	4:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/23/2011	5:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/23/2011	6:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/23/2011	7:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/23/2011	8:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/23/2011	9:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/23/2011	10:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/23/2011	11:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/24/2011	12:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/24/2011	1:00:00 AM	1.91	2.5	0.59	1.38	620.4
10/24/2011	2:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/24/2011	3:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/24/2011	4:00:00 AM	1.93	2.5	0.57	1.31	588.9
10/24/2011	5:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/24/2011	6:00:00 AM	1.88	2.5	0.62	1.49	668.7
10/24/2011	7:00:00 AM	1.87	2.5	0.63	1.53	685.0
10/24/2011	8:00:00 AM	1.86	2.5	0.64	1.56	701.5
10/24/2011	9:00:00 AM	1.86	2.5	0.64	1.56	701.5

10/24/2011	10:00:00 AM	1.85	2.5	0.65	1.60	718.1
10/24/2011	11:00:00 AM	1.85	2.5	0.65	1.60	718.1
10/24/2011	12:00:00 PM	1.85	2.5	0.65	1.60	718.1
10/24/2011	1:00:00 PM	1.85	2.5	0.65	1.60	718.1
10/24/2011	2:00:00 PM	1.85	2.5	0.65	1.60	718.1
10/24/2011	3:00:00 PM	1.85	2.5	0.65	1.60	718.1
10/24/2011	4:00:00 PM	1.85	2.5	0.65	1.60	718.1
10/24/2011	5:00:00 PM	1.86	2.5	0.64	1.56	701.5
10/24/2011	6:00:00 PM	1.86	2.5	0.64	1.56	701.5
10/24/2011	7:00:00 PM	1.86	2.5	0.64	1.56	701.5
10/24/2011	8:00:00 PM	1.86	2.5	0.64	1.56	701.5
10/24/2011	9:00:00 PM	1.85	2.5	0.65	1.60	718.1
10/24/2011	10:00:00 PM	1.85	2.5	0.65	1.60	718.1
10/24/2011	11:00:00 PM	1.85	2.5	0.65	1.60	718.1
10/25/2011	12:00:00 AM	1.85	2.5	0.65	1.60	718.1
10/25/2011	1:00:00 AM	1.85	2.5	0.65	1.60	718.1
10/25/2011	2:00:00 AM	1.84	2.5	0.66	1.64	734.9
10/25/2011	3:00:00 AM	1.85	2.5	0.65	1.60	718.1
10/25/2011	4:00:00 AM	1.85	2.5	0.65	1.60	718.1
10/25/2011	5:00:00 AM	1.84	2.5	0.66	1.64	734.9
10/25/2011	6:00:00 AM	1.84	2.5	0.66	1.64	734.9
10/25/2011	7:00:00 AM	1.84	2.5	0.66	1.64	734.9
10/25/2011	8:00:00 AM	1.83	2.5	0.67	1.68	751.8
10/25/2011	9:00:00 AM	1.82	2.5	0.68	1.71	768.8
10/25/2011	10:00:00 AM	1.8	2.5	0.70	1.79	803.2
10/25/2011	11:00:00 AM	1.8	2.5	0.70	1.79	803.2
10/25/2011	12:00:00 PM	1.8	2.5	0.70	1.79	803.2
10/25/2011	1:00:00 PM	1.84	2.5	0.66	1.64	734.9
10/25/2011	2:00:00 PM	1.85	2.5	0.65	1.60	718.1
10/25/2011	3:00:00 PM	1.86	2.5	0.64	1.56	701.5
10/25/2011	4:00:00 PM	1.87	2.5	0.63	1.53	685.0
10/25/2011	5:00:00 PM	1.87	2.5	0.63	1.53	685.0
10/25/2011	6:00:00 PM	1.87	2.5	0.63	1.53	685.0
10/25/2011	7:00:00 PM	1.85	2.5	0.65	1.60	718.1
10/25/2011	8:00:00 PM	1.83	2.5	0.67	1.68	751.8
10/25/2011	9:00:00 PM	1.83	2.5	0.67	1.68	751.8
10/25/2011	10:00:00 PM	1.83	2.5	0.67	1.68	751.8
10/25/2011	11:00:00 PM	1.84	2.5	0.66	1.64	734.9
10/26/2011	12:00:00 AM	1.83	2.5	0.67	1.68	751.8
10/26/2011	1:00:00 AM	1.84	2.5	0.66	1.64	734.9
10/26/2011	2:00:00 AM	1.86	2.5	0.64	1.56	701.5
10/26/2011	3:00:00 AM	1.86	2.5	0.64	1.56	701.5
10/26/2011	4:00:00 AM	1.85	2.5	0.65	1.60	718.1
10/26/2011	5:00:00 AM	1.85	2.5	0.65	1.60	718.1
10/26/2011	6:00:00 AM	1.85	2.5	0.65	1.60	718.1
10/26/2011	7:00:00 AM	1.83	2.5	0.67	1.68	751.8
10/26/2011	8:00:00 AM	1.83	2.5	0.67	1.68	751.8

10/26/2011	9:00:00 AM	1.83	2.5	0.67	1.68	751.8
10/26/2011	10:00:00 AM	1.82	2.5	0.68	1.71	768.8
10/26/2011	11:00:00 AM	1.81	2.5	0.69	1.75	785.9
10/26/2011	12:00:00 PM	1.82	2.5	0.68	1.71	768.8
10/26/2011	1:00:00 PM	1.82	2.5	0.68	1.71	768.8
10/26/2011	2:00:00 PM	1.83	2.5	0.67	1.68	751.8
10/26/2011	3:00:00 PM	1.84	2.5	0.66	1.64	734.9
10/26/2011	4:00:00 PM	1.84	2.5	0.66	1.64	734.9
10/26/2011	5:00:00 PM	1.85	2.5	0.65	1.60	718.1
10/26/2011	6:00:00 PM	1.85	2.5	0.65	1.60	718.1
10/26/2011	7:00:00 PM	1.86	2.5	0.64	1.56	701.5
10/26/2011	8:00:00 PM	1.87	2.5	0.63	1.53	685.0
10/26/2011	9:00:00 PM	1.87	2.5	0.63	1.53	685.0
10/26/2011	10:00:00 PM	1.88	2.5	0.62	1.49	668.7
10/26/2011	11:00:00 PM	1.87	2.5	0.63	1.53	685.0
10/27/2011	12:00:00 AM	1.88	2.5	0.62	1.49	668.7
10/27/2011	1:00:00 AM	1.88	2.5	0.62	1.49	668.7
10/27/2011	2:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/27/2011	3:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/27/2011	4:00:00 AM	1.88	2.5	0.62	1.49	668.7
10/27/2011	5:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/27/2011	6:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/27/2011	7:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/27/2011	8:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/27/2011	9:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/27/2011	10:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/27/2011	11:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/27/2011	12:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/27/2011	1:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/27/2011	2:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/27/2011	3:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/27/2011	4:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/27/2011	5:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/27/2011	6:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/27/2011	7:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/27/2011	8:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/27/2011	9:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/27/2011	10:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/27/2011	11:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/28/2011	12:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/28/2011	1:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/28/2011	2:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/28/2011	3:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/28/2011	4:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/28/2011	5:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/28/2011	6:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/28/2011	7:00:00 AM	1.89	2.5	0.61	1.45	652.4

10/28/2011	8:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/28/2011	9:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/28/2011	10:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/28/2011	11:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/28/2011	12:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/28/2011	1:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/28/2011	2:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/28/2011	3:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/28/2011	4:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/28/2011	5:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/28/2011	6:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/28/2011	7:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/28/2011	8:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/28/2011	9:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/28/2011	10:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/28/2011	11:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/29/2011	12:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/29/2011	1:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/29/2011	2:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/29/2011	3:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/29/2011	4:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/29/2011	5:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/29/2011	6:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/29/2011	7:00:00 AM	1.91	2.5	0.59	1.38	620.4
10/29/2011	8:00:00 AM	1.91	2.5	0.59	1.38	620.4
10/29/2011	9:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/29/2011	10:00:00 AM	1.89	2.5	0.61	1.45	652.4
10/29/2011	11:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/29/2011	12:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/29/2011	1:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/29/2011	2:00:00 PM	1.89	2.5	0.61	1.45	652.4
10/29/2011	3:00:00 PM	1.91	2.5	0.59	1.38	620.4
10/29/2011	4:00:00 PM	1.91	2.5	0.59	1.38	620.4
10/29/2011	5:00:00 PM	1.91	2.5	0.59	1.38	620.4
10/29/2011	6:00:00 PM	1.91	2.5	0.59	1.38	620.4
10/29/2011	7:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/29/2011	8:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/29/2011	9:00:00 PM	1.91	2.5	0.59	1.38	620.4
10/29/2011	10:00:00 PM	1.91	2.5	0.59	1.38	620.4
10/29/2011	11:00:00 PM	1.91	2.5	0.59	1.38	620.4
10/30/2011	12:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/30/2011	1:00:00 AM	1.91	2.5	0.59	1.38	620.4
10/30/2011	2:00:00 AM	1.9	2.5	0.60	1.42	636.4
10/30/2011	3:00:00 AM	1.91	2.5	0.59	1.38	620.4
10/30/2011	4:00:00 AM	1.99	2.5	0.51	1.11	497.8
10/30/2011	5:00:00 AM	1.74	2.5	0.76	2.03	909.5
10/30/2011	6:00:00 AM	1.78	2.5	0.72	1.87	838.1

10/30/2011	7:00:00 AM	1.84	2.5	0.66	1.64	734.9
10/30/2011	8:00:00 AM	1.86	2.5	0.64	1.56	701.5
10/30/2011	9:00:00 AM	1.87	2.5	0.63	1.53	685.0
10/30/2011	10:00:00 AM	1.88	2.5	0.62	1.49	668.7
10/30/2011	11:00:00 AM	1.88	2.5	0.62	1.49	668.7
10/30/2011	12:00:00 PM	1.88	2.5	0.62	1.49	668.7
10/30/2011	1:00:00 PM	1.86	2.5	0.64	1.56	701.5
10/30/2011	2:00:00 PM	1.88	2.5	0.62	1.49	668.7
10/30/2011	3:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/30/2011	4:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/30/2011	5:00:00 PM	1.91	2.5	0.59	1.38	620.4
10/30/2011	6:00:00 PM	1.91	2.5	0.59	1.38	620.4
10/30/2011	7:00:00 PM	1.9	2.5	0.60	1.42	636.4
10/30/2011	8:00:00 PM	1.91	2.5	0.59	1.38	620.4
10/30/2011	9:00:00 PM	1.92	2.5	0.58	1.35	604.6
10/30/2011	10:00:00 PM	1.91	2.5	0.59	1.38	620.4
10/30/2011	11:00:00 PM	1.91	2.5	0.59	1.38	620.4
10/31/2011	12:00:00 AM	1.91	2.5	0.59	1.38	620.4
10/31/2011	1:00:00 AM	1.91	2.5	0.59	1.38	620.4
10/31/2011	2:00:00 AM	1.92	2.5	0.58	1.35	604.6
10/31/2011	3:00:00 AM	1.92	2.5	0.58	1.35	604.6
10/31/2011	4:00:00 AM	1.91	2.5	0.59	1.38	620.4
10/31/2011	5:00:00 AM	1.92	2.5	0.58	1.35	604.6
10/31/2011	6:00:00 AM	1.91	2.5	0.59	1.38	620.4
10/31/2011	7:00:00 AM	1.92	2.5	0.58	1.35	604.6
10/31/2011	8:00:00 AM	1.91	2.5	0.59	1.38	620.4
10/31/2011	9:00:00 AM	1.91	2.5	0.59	1.38	620.4
10/31/2011	10:00:00 AM	1.91	2.5	0.59	1.38	620.4
10/31/2011	11:00:00 AM	1.91	2.5	0.59	1.38	620.4
10/31/2011	12:00:00 PM	1.92	2.5	0.58	1.35	604.6
10/31/2011	1:00:00 PM	1.92	2.5	0.58	1.35	604.6
10/31/2011	2:00:00 PM	1.93	2.5	0.57	1.31	588.9
10/31/2011	3:00:00 PM	1.91	2.5	0.59	1.38	620.4
10/31/2011	4:00:00 PM	1.92	2.5	0.58	1.35	604.6
10/31/2011	5:00:00 PM	1.92	2.5	0.58	1.35	604.6
10/31/2011	6:00:00 PM	1.92	2.5	0.58	1.35	604.6
10/31/2011	7:00:00 PM	1.92	2.5	0.58	1.35	604.6
10/31/2011	8:00:00 PM	1.92	2.5	0.58	1.35	604.6
10/31/2011	9:00:00 PM	1.92	2.5	0.58	1.35	604.6
10/31/2011	10:00:00 PM	1.92	2.5	0.58	1.35	604.6
10/31/2011	11:00:00 PM	1.92	2.5	0.58	1.35	604.6